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Reza Kachouie, Felix Mavondo, Sean Sands,

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Reza Kachouie, Felix Mavondo and Sean Sands
Department of Marketing, Monash Business School, Melbourne, Australia

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Abstract

Purpose – The purpose of this paper is to examine the indirect relationship between dynamic capabilities (DCs) and organizational outcomes through matching and creating market change. In addition, the research aims to gain a deeper understanding of the role of marketing in DCs and to extend beyond a simplistic discussion of DCs by studying proactive market orientation and value innovation as specific DCs.

Design/methodology/approach – A questionnaire was developed and data were collected from 270 senior executives. After ensuring reliability and validity, the hypotheses were examined by applying structural equation modeling and Monte Carlo simulation.

Findings – The findings indicate that dynamic marketing capabilities (DMCs) are critical in the reconfiguration of operational marketing capabilities, which in turn lead to enhanced organizational performance. The results also suggest that organizations with enhanced DMCs are able to initiate market disruption and achieve superior performance by out-competing their rivals.

Practical implications – The research provides guidelines for managers wanting to exploit their DMCs by showing that organizations can match the environment, create market turbulence or combine both strategies to fully exploit their DMCs. This study also provides managers with actionable tools that are specific, robust and easily applied.

Originality/value – This study is one of the few to incorporate induced market turbulence into the DC literature and conceptualize, develop and validate scales to measure it. The study provides empirical evidence for the claim that operational marketing capabilities are necessary to utilize the benefits of DMCs.

Keywords Value innovation, Dynamic capabilities, Customer value, Proactive market orientation, Dynamic marketing capabilities, Induced market turbulence

Paper type Research paper

"Nothing endures but change" Heraclitus (540 BC – 480 BC)

Introduction

In today's business environment, change is rapid, prompting organizations to evolve to stay abreast of broader environmental changes. In fact, organizational performance could be negatively affected if organizations do not adequately keep up with environmental change (Audia *et al.*, 2000). As such, organizational capabilities and processes need to be developed, extended and/or renewed. The dynamic capabilities (DCs) view offers a contemporary view of how competitive advantage is attained and sustained in dynamic markets (Teece *et al.*, 1997). Early work in the DCs domain proposes a direct relationship between DCs and performance outcomes (Teece and Pisano, 1994). More recent literature argues that the relationship between DCs and organizational outcomes is more complicated than a simple, direct link (Pavlou and El Sawy, 2011). However, there is still debate in the literature about

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whether and how DCs affect organizational outcomes (Helfat *et al.*, 2007, Eriksson, 2014; Ambrosini and Bowman, 2009).

Scholars believe that DCs are necessary to "match and even create market change" (Eisenhardt and Martin, 2000), and organizations orchestrate their resources to address and shape a rapidly changing environment (Teece, 2014). Therefore, to achieve competitive advantage, organizations can use two distinct but complementary strategies: matching environmental demands and creating market change. The literature on matching the environment suggests that those organizations that use DCs to reconfigure resources sooner, more knowledgeably and in a more unexpected manner than their competitors can achieve a competitive advantage (Eisenhardt and Martin, 2000). From this perspective, DCs do not directly result in marketable goods or services (Teece *et al.*, 1997); rather, they are engaged in building, integrating and reconfiguring operational capabilities (Protogerou *et al.*, 2012; Teece *et al.*, 1997; Eisenhardt and Martin, 2000; Zahra *et al.*, 2006; Ambrosini and Bowman, 2009). In a parallel stream of the literature, it is suggested that organizations can perform a proactive role in creating their niches and induce governed changes in the environment (Luksha, 2008). However, scholars believe that this stream of research is often neglected in DCs research and a more active role to DCs should be assigned in terms of shaping rather than being responsive to the environment (Wilden *et al.*, 2016). This study examines the hotly debated issue of the indirect relationship between DCs and organizational outcomes through operational marketing capabilities and induced market turbulence.

While there is ample literature on DCs in strategy and management, research on DCs in marketing remains fragmented (Barrales-Molina *et al.*, 2014), and today's scholars are seeking ways to incorporate marketing and DCs (Bruni and Verona, 2009; Fang and Zou, 2009; Landroguez *et al.*, 2011). The importance of marketing capabilities in the DCs framework is due to their role in generating knowledge about the needs of customers, competing products and distribution channels (Barrales-Molina *et al.*, 2014), as well as their contribution to organizational performance (Cacciolatti and Lee, 2016). The term "dynamic marketing capabilities" (DMCs) has subsequently evolved and points to a subset of DCs (Bruni and Verona, 2009) with an emphasis on customer value (Fang and Zou, 2009). Thus, the second aim of this research is to gain a deeper understanding of the role of marketing in DCs and to go beyond a general discussion about DCs. To achieve this, two distinct DMCs, proactive market orientation (MO) and value innovation, are investigated. These differ from DCs studied in non-marketing contexts. Marketing and innovation are basic functions of any organization that produce outcomes (Drucker, 1974) and have synergetic effects (Menguc and Auh, 2006). These two DMCs are selected because they have the key characteristics of DMCs. Moreover, they are general in nature and exist in most firms to a greater or less extent. On the other hand, little is studied about how multiple DCs perform in the presence of other DCs (Bingham *et al.*, 2015); therefore, these two DCs are researched in parallel in this study. MO, the foundation of modern marketing (Sternquist *et al.*, 2010), assists organizations in identifying and satisfying customer needs more efficiently and more effectively than competitors in search of superior outcomes (Kotler, 2011). On the other hand, value innovation encourages an organization to systematically generate new and substantively superior customer value (Berghman *et al.*, 2012) by the purposeful orchestration of organizational knowledge and skills (Pitt and Clarke, 1999).

This article is organized as follows. The next section details the theoretical background and the development of hypotheses. This is followed by research methodology and data

analysis procedure. The findings are presented and discussed, and limitations pointed out, followed by academic and managerial implications of the study.

Theoretical background

Dynamic capabilities

The DCs view seeks to answer the underlying question of how organizations attain and sustain competitive advantage in changing environments (Teece *et al.*, 1997; Peteraf *et al.*, 2013) and is rooted in evolutionary economics and, more specifically, the resource-based view of the firms (Eisenhardt and Martin, 2000; Zahra and George, 2002; Teece *et al.*, 1997). DCs are defined as "the capacity of an organization to purposefully create, extend or modify its resource base" (Helfat *et al.*, 2007). Capacity implies the ability to perform a task at an acceptable level, denoting repeatability and intent, while a firm's resource base comprises all tangible, intangible and human resources and capabilities that a firm possesses, controls or to which it has preferential access (Helfat *et al.*, 2007).

Organizational capabilities could be broadly categorized into DCs and operational capabilities. Operational capabilities allow an organization to perform basic functional activities (Collis, 1994) and are focused on sustaining "the status quo" (Stadler *et al.*, 2013). They help the organization to "make a living" in the short term (Winter, 2003) and assist with day-to-day problem-solving (Zahra *et al.*, 2006). In contrast, DCs are higher order (Barreto, 2010), path dependent (Teece *et al.*, 1997) and future-oriented (Ambrosini and Bowman, 2009) capabilities that are engaged in reconfiguring operational capabilities (Ambrosini and Bowman, 2009). This view of DCs assists researchers to overcome the criticism of tautology, operational capabilities change and DCs cause that change (Laaksonen and Peltoniemi, 2016). Table I compares and contrasts the main characteristics of operational capabilities, DCs and DMCs (partly adapted from Barrales-Molina *et al.*, 2014).

Operational capabilities	DCs	DMCs
All three groups	Collection of routines (Winter, 2003) To some extent stable (Ambrosini and Bowman, 2009)	
Competing today (Ambrosini and Bowman, 2009) Enable a firm to make living in the present (Winter, 2003) Ability to execute day-to-day activities (Pavlou and El Sawy, 2011) Ability to solve problems (Zahra *et al.*, 2006) Do things right (Teece, 2014) Lead to technical fitness (Teece, 2007, 2014)	Path dependent (Teece *et al.*, 1997) and future-oriented (Ambrosini and Bowman, 2009) Enable a firm to alter how it makes its living (Teece *et al.*, 1997) Modify operational capabilities (Zahra and George, 2002; Zahra *et al.*, 2006; Winter, 2003; Ambrosini and Bowman, 2009) Ability to change the way the firm solves its problems (Zahra *et al.*, 2006) Do the right things (Teece, 2014) Result in evolutionary fitness (Teece, 2007, 2014)	Subset of DCs (Bruni and Verona, 2009) Strongly affected by marketing (Bruni and Verona, 2009; Easterby-Smith *et al.*, 2009; Fang and Zou, 2009) Depend on market knowledge (Bruni and Verona, 2009, Griffith and Harvey, 2001, Menguc and Auh, 2006) Support organization to absorb market knowledge (Bruni and Verona, 2009, Menguc and Barker, 2005, Marsh and Stock, 2003)

Source: Partly adapted from Barrales-Molina *et al.* (2014)

Table I. Operational capabilities, DCs and DMCs

Dynamic and operational marketing capabilities

Marketing plays a strategic role in the DCs framework because of the contribution of marketing capabilities in generating knowledge about the needs of customers, competing products and distribution channels (Barrales-Molina *et al.*, 2014). The term DMCs is defined as:

> [. . .] human capital, social capital and the cognition of managers involved in the creation, use and integration of market knowledge and marketing resources in order to match and create market and technological change (Bruni and Verona, 2009).

Accordingly, DMCs are a subset of DCs (Bruni and Verona, 2009) with the emphasis on customer value (Fang and Zou, 2009). A DC could be considered as a real DMC if the marketing managers and the marketing department have a significant impact on it (Protogerou *et al.*, 2012; Barrales-Molina *et al.*, 2014); it fundamentally uses market knowledge as its raw materials (Menguc and Auh, 2006); it acts as a tool to absorb market knowledge (Bruni and Verona, 2009); and it disseminates market knowledge within the organization (Fang and Zou, 2009; Landroguez *et al.*, 2011).

Proactive market orientation. MO is the foundation of modern marketing (Sternquist *et al.*, 2010) and is defined as discovering, understanding and satisfying customers' stated needs (responsive MO) and latent needs (proactive MO) (Narver *et al.*, 2004). MO is about achieving competitive advantage through the creation of customer value in a customer-focused organization (Ellis, 2006). Scholars believe that the study of MO is critical in acquiring a better understanding of the role of marketing in the development of DCs (Fang and Zou, 2009). In fact, there is a close relationship between DCs and MO, and under specific conditions, MO performs as a DC (Barrales-Molina *et al.*, 2014; Menguc and Auh, 2006). In dynamic environments, to attain and sustain competitive advantage, organizations must intensify their proactive MO (Narver *et al.*, 2004). Particularly in more turbulent environments, proactive MO becomes more advantageous (Tsai *et al.*, 2008).

MO leads to a deeper insight into customers and competitors. This insight plays a key role in the allocation of organizational resources (Atuahene-Gima, 2005). Therefore, MO becomes necessary for resource allocation and configuration, especially in dynamic environments. Moreover, MO supports capability building and reconfiguration in organizations (Day, 1994; Atuahene-Gima, 2005). In particular, proactive MO performs interactively with other organizational capabilities, thereby reinforcing each other (Madhavaram and Hunt, 2008; Menguc and Auh, 2006). Overall, proactive MO is a real DMC as it affects resources and capabilities configuration and assists the organization to absorb and disseminate market knowledge.

Value innovation. Value innovation capability is the capability of an organization to systematically generate value innovation initiatives to create new and substantively superior customer value by the redevelopment of their business model and shifting roles and relations among various industry players (Berghman *et al.*, 2012). Organizations develop value innovation capability to rejuvenate (Baden-Fuller and Stopford, 1994), to attain competitive advantage (Baden-Fuller and Pitt, 1996) and to achieve superior customer value (Matthyssens *et al.*, 2006). Through value innovation, organizations can create new market space (Kim and Mauborgne, 1999), enabling them to out-compete, instead of out-perform, competitors (Pitt and Clarke, 1999). This means that value innovation assists an organization to surpass its rivals by creating a new competitive landscape instead of just improving its performance. For example, instead of competing with other news programs on television networks, "The Project" (an Australian news and current affairs program telecast on Network Ten) with the slogan "News delivered differently" is out-competing its rivals,

being one of the few news programs in Australia with a live audience. They report recent news stories with a comic twist. In value innovation logic, a firm pursues total solution customers seek, goes beyond traditional offerings, is not limited to the resources the organization already possesses and may shape or transform conditions of the industry (Kim and Mauborgne, 1997).

Value innovation entails creating differentiation in the marketplace (Kim and Mauborgne, 1999). In this regard, organizations implement strategies to compete in non-traditional ways, which differ from industry norms (Berghman *et al.*, 2012). An example of value innovation is the establishment of an alliance between a pharmaceutical firm, a food packaging specialist and a manufacturer of biotech ingredients to match their capabilities and offer total solutions to food manufacturers (Matthyssens *et al.*, 2006). On the one hand, value innovation leads to a change in a firm's business model (Berghman *et al.*, 2012), and to benefit from the new business model, organizational resources and capabilities should be realigned and reconfigured. Therefore, value innovation results in the reconfiguration of resources and capabilities. On the other hand, it depends on the organization's knowledge about customers and competitors, and customer value plays a critical role in this (Matthyssens *et al.*, 2006). Thus, value innovation is a real DMC.

Operational marketing capabilities. Operational marketing capabilities are integrative organizational processes with the aim of exploiting collective knowledge, abilities and other resources of the organization to market-related needs of the business (Vorhies, 1998). These capabilities enable an organization to organize marketing activities to create unique customer solutions (Day, 1994) and achieve competitive advantages (Santos-Vijande *et al.*, 2012). Moreover, marketing capabilities empower an organization to create sustainable bonds with its customers (Day, 1994). Operational marketing capabilities enhance resource transformation into outputs through the orchestration of the marketing mix and other inputs (Day, 1994). Vorhies and Morgan (2005) and Prašnikar *et al.* (2008) recognize several distinct marketing capabilities, including, but not limited to, pricing, channel management, marketing planning and marketing implementation.

Induced market turbulence

In highly competitive and ambiguous environments, organizations implement strategies of environment construction (Santos and Eisenhardt, 2009; Daft and Weick, 1984) and entrepreneurs proactively induce governed changes to the environment (Luksha, 2008). There is a need for organizations to develop specific capabilities to manipulate and modify the environment so as to take advantage of these disruptive strategies (Luksha, 2008). Consistent with the market-driving perspective, this approach implies that firms can and do induce turbulence into the market and change the behavior of players (Jaworski *et al.*, 2000) and generate market disequilibrium (D'Aveni, 1999). By taking a market-driving approach, an organization can shape the behavior, structure and preferences of market participants (Jaworski *et al.*, 2000; Hills and Sarin, 2003; Kumar *et al.*, 2000).

To alter the environment, a firm can implement various strategies such as manipulating the market structure (Blut *et al.*, 2013). To do so, the firm may attempt to influence the number of competitors by means of acquisition, cooperating with suppliers and distributors or even through aggressive competition. For example, in 1999, Exxon and Mobil merged and formed ExxonMobil, which became one of the largest company in the field (Weston, 2002). As a result, Federal Trade Commission required massive restructuring of many fuel stations to prevent total monopolization.

Changing market behavior is another strategy that firms could implement (Blut *et al.*, 2013). In this regard, a firm may seek to influence the behavior of the market by developing

products with a high degree of novelty or products that activate the latent needs and desires of customers. By regularly developing new products, a firm attempts to not only survive in a changing environment (Kachouie and Sedighadeli, 2015) but also stimulate customers to reconsider their preferences/aversions or encourage customers to reconsider the meaning of certain product attributes. The firm can adopt ideas from other sectors to surprise competitors or may establish new product/technology standards within its own industry sector. Another approach is to change customer preferences by offering previously unavailable products or services or delivering exceptional products or services that outperform those of competitors (Van Vuuren and Wörgötter, 2013). For example, in 2001, the Siemens Company introduced the first mobile phone with memory extension and MP3 player that was named SL45 (Nick, 2015). After some early adopter customers enjoyed listening to music on SL45 as a bonus, more and more customers desired the new feature. After some time, the customers demanded the new capability not as an extra feature, but as a standard inclusion.

Firms may seek to influence the macro-environment by lobbying and influencing the political environment. In this regard, the firm may make political alliances, try to influence foreign trade regulations, taxation policies and employment legislation in its favor and try to influence the levels and focuses of government and industrial R&D expenditure in its favor (Wilson and Gilligan, 2005). Governed influence on the environment and niche construction could be a result of an individual firm/entrepreneur actions, such as political actions, supplier development and technological leadership (Luksha, 2008). Moreover, the introduction of turbulence into the market could be the result of collective actions (such as social movements) of a group of organizations/entrepreneurs (Luksha, 2008). For example, in 2005, Nike released the database of its 750 factories worldwide (Chandler and Werther, 2014). This was a response to a crisis of denying responsibility for the inhumane condition in its factories. At the time, there were no laws requiring companies to reveal the identity of suppliers or factories. However, by doing so, Nike shifted the expectation of customers, putting extra pressure on its rivals.

Hypotheses development

The development of organizational capabilities is closely linked to the knowledge about the evolution of the market that the business is serving (Levinthal and Myatt, 1994). By examining this knowledge, organizations discover potential opportunities and uncover deficiencies in existing capabilities. Proactive MO helps organizations to discover, understand and satisfy customers' latent needs (Narver *et al.*, 2004). This suggests that firms with different levels of proactive MO can understand and therefore satisfy customer needs differently; therefore, they will apply their marketing effort differently. This enables the organization with a superior proactive MO to make more efficient and effective decisions regarding the most productive combination of resources and capabilities. For example, the knowledge about competitors and latent needs of the customers (proactive MO) leads to more effective product development, market positioning, segmentation and targeting (Narver *et al.*, 2004).

Furthermore, by engaging in value innovation activities, organizations seek to create new value for customers in ways that are novel. To do so, organizations need to accumulate, configure and exploit resources to achieve value innovation (Sirmon and Hitt, 2003). However, because of value creation activities, existing resources and capabilities may become obsolete. This suggests that when a firm initiates new customer value, there is a need for substitution, evolution and transformation of the organizational resource base, including its marketing capabilities. It is therefore hypothesized that:

H1. Dynamic marketing capabilities a) proactive market orientation and b) value innovation positively impact operational marketing capabilities.

Marketing capabilities enable an organization to implement marketing activities that create unique customer value (Day, 1994) and are critical for attaining and sustaining competitive advantage and enhancing a firm's performance (Day, 1994; Krasnikov and Jayachandran, 2008; Wang *et al.*, 2004; Santos-Vijande *et al.*, 2012). For example, Zou *et al.* (2003) argue that alertness to competitors' tactics of pricing will positively affect a firm's performance. This suggests that when a firm has superior pricing capability, it can price its products or services optimally, thereby improving profitability and market effectiveness. Operational marketing capabilities could be a potential source of competitive advantage as they may be valuable, rare, difficult to imitate and non-substitutable (Morgan *et al.*, 2009; Vorhies and Morgan, 2005; Dutta *et al.*, 2003). Therefore, when firms have superior operational marketing capabilities, they can achieve superior organizational outcomes such as superior customer value, profitability and market effectiveness. Accordingly, *H2* is as follows:

H2. Operational marketing capabilities positively impact a) customer value, b) profitability and c) market effectiveness.

While DCs do not directly result in marketable goods or services (Teece *et al.*, 1997), they are required in building, integrating and reconfiguring operational capabilities (Protogerou *et al.*, 2012). Moreover, DCs affect the efficiency and effectiveness of operational capabilities (Wilhelm *et al.*, 2015). Hence, DCs can change resources, routines and capabilities (Ambrosini and Bowman, 2009; Eisenhardt and Martin, 2000; Teece *et al.*, 1997; Zahra *et al.*, 2006) through substitution, addition and transformation (Lavie, 2006). Organizations with superior reconfiguration capability are capable of seizing opportunities by combining resource and organizational processes and structures in new ways (Jantunen *et al.*, 2005). Therefore, in line with *H1* and *H2*, the following hypotheses are proposed:

H3. The relationship between proactive market orientation and a) customer value, b) profitability and c) market effectiveness is mediated by operational marketing capabilities.

H4. The relationship between value innovation and a) customer value, b) profitability and c) market effectiveness is mediated by operational marketing capabilities.

In dynamic environments, organizations may invest in and implement strategies of environment construction and manipulation (Santos and Eisenhardt, 2009; Luksha, 2008). However, organizations are not equally capable of manipulating the environment and do not have the same necessary resources at their disposal (Teece, 2007). This means that some organizations can influence the environment more effectively or efficiently than their competitors. This heterogeneity could serve as a potential source of competitive advantage (Barney, 1991).

To be able to induce market turbulence, organizations need specific capabilities. For example, organizations may develop the capability of discovering early indications of change in customers' needs or preferences through proactive orientation (Blocker *et al.*, 2011). Customers do not always know, and are not able to imagine, what they may want in future. Thus, firms should not only foresee "alternative futures" (Zeithaml *et al.*, 2006) but also engage in enlivening one or more of these futures and create and manage customers' future expectations (Sedighadeli and Kachouie, 2013). By being proactive market-oriented, organizations not only recognize and fulfill customers' latent needs but also shape customers' future expectations. This indicates that proactive MO assists organizations to

shape customers' behavior. For example, by being proactive market-oriented, Apple established the "Genius Bar" (a tech support station inside Apple retail stores) and started to offer help and support for Apple products. By doing so, Apple not only anticipated what its customers would want but also shaped their preferences. As a result, customers' preferences were upgraded to a new level. Thus, firms, individually or collectively, shape the behavior, structure and preferences of market participants by adopting a market-driving approach (Jaworski *et al.*, 2000; Hills and Sarin, 2003; Kumar *et al.*, 2000). Therefore, a deep commitment to understanding what customers really need leads to a shift in the behavior and structure of the market.

Furthermore, value innovation has an impact at the microenvironment level (Berghman *et al.*, 2012). This happens through the delivery of superior value to customers by means of innovations that disrupt the market or have the potential to do so (Garcia and Calantone, 2002), as well as altering roles and relationships among industry players (Berghman *et al.*, 2012). Therefore, when organizations have value innovation capability, instead of focusing on existing markets and market participants, they attempt to create superior value by redefining roles and relationships for their own benefit. For example, after the introduction of Uber in 2009, the structure of the taxi market changed radically. This, in turn, caused a shift in the behavior of the market players. Overall, our chosen DMCs help the organizations to induce turbulence into the market; therefore, the following hypothesis is posited:

H5. Dynamic marketing capabilities of a) proactive market orientation and b) value innovation positively impact the ability to induce market turbulence.

DCs are characterized as complicated routines that depend on a firm's existing path (Eisenhardt and Martin, 2000); however, they can assist a firm to create its future path (Arthur, 1989). For example, Oliver and Holzinger (2008) define dynamic political management capabilities:

> [...] as the dynamic processes by which a firm influences or complies with its political environment for the purpose of generating future value or protecting the current value of the firm from future loss or erosion.

They state that the political environment of organizations is a political marketplace that involves both firms and policy-makers. They argue that firms can comply with the political environment or influence it. This influence could be through defensive strategies such as lobbying to raise entry barriers or through proactive strategies such as establishing standards that will redefine current legislations. These strategies create a competitive advantage, which is costly for competitors to imitate or avoid (Oliver and Holzinger, 2008). Therefore, the lobbying and influencing the political environment can lead to superior outcomes for the creator of the disruption.

The proactive engagement behavior of organizations is not limited to the political environment. By taking a market-driving approach, organizations shape the behavior, structure and preferences of market participants (Jaworski *et al.*, 2000; Hills and Sarin, 2003; Kumar *et al.*, 2000). A market-driving firm attains competitive advantage by offering greater customer value through the implementation of a unique business model (Kumar *et al.*, 2000; Wilden *et al.*, 2016), such as the development of strong network relationships, to get access to critical knowledge of network partner (De Clercq *et al.*, 2015). By doing so, the firm changes the structure of the market, which potentially becomes a source of extensive profitability for the firm (Kumar *et al.*, 2000). In this way, the customer receives more value and the firm becomes more profitable. For example, instead of broadcasting at specific times of the day, CNN pioneered the telecast of 24/7 news (Taipei Times, 2005). Customers

(audience) are able to view news when it is most convenient for them, instead of organizing their viewing time around the network's schedule, thereby receiving more value. Another example is the Greek yogurt brand Chobani, founded in the USA in 2005. In 2005, Greek yogurt had 1 per cent of the yogurt category and was perceived as a specific diet product. Unlike traditional Greek yogurt, which was available only at specialty stores, Chobani was to be sold in dairy aisles and to be easily accessible. The company approached retailers directly rather than through distributor networks. By 2011, customer perceptions of Greek yogurt had changed and through value innovation, Chobani became the US market leader in the yogurt category (Gruley, 2013). Thus, value innovation activities resulted in changing the behavior of customers, which in turn lead to increased profitability and market effectiveness. Therefore:

H6. Induced market turbulence positively impacts a) customer value, b) profitability and c) market effectiveness.

Teece *et al.* (1997) argue that in terms of DCs, sustainable competitive advantage is related to Schumpeterian creative destruction (Schumpeter, 1934), whereby an entrepreneur produces disequilibrium rather than following the optimizing strategy (Rocha and Birkinshaw, 2007). This strategy forces less innovative and less efficient firms to leave the market (Rocha and Birkinshaw, 2007), thereby providing space for the creator of the disruption. For example, when a first-mover introduces a new product to market, it tries to shape customer preferences. To do so, the firm may attempt to establish standards by influencing the importance of product attributes and their ideal combination to its own advantage (Kerin *et al.*, 1992). This creates entry barriers as the customers' preferences become established. Hence, in line with *H5* and *H6*, firms with specific DMCs may induce market turbulence, which in turn produces superior organizational outcomes. Therefore, the following hypotheses are advanced:

H7. The relationship between proactive market orientation and a) customer value, b) profitability and c) market effectiveness is mediated by induced market turbulence.

H8. The relationship between value innovation and a) customer value, b) profitability and c) market effectiveness is mediated by induced market turbulence.

Figure 1 depicts the conceptual framework of this research resulting from hypotheses development.

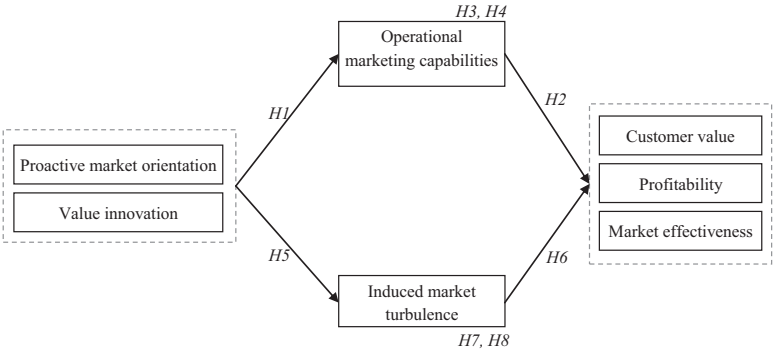

Figure 1. Conceptual framework

Method

Sample and data collection

Data were acquired from a sample of managers working in Australia, including chief executive officers (CEOs), director and senior managers within finance, marketing and other related areas. Respondent details were acquired from a professional research firm, and professional associations and data were collected via mail and online self-administrated questionnaires. To test the quality of responses and minimize measurement error, the questionnaire included an item asking how confident the respondent was about the accuracy of the response (seven-point Likert scale, where 1 = "not confident" and 7 = "very confident"). This produced a mean of 5.59, indicating a high level of confidence from respondents. Four respondents indicated a low level of confidence (<4) in their responses and were excluded from further analysis. To minimize non-response bias and improve the response rate, respondents were assured of confidentiality and were informed that results would be published only in an aggregated form. No significant difference was found between early and late respondents and between various sources of data across key variables. No differences were found by employment level of respondents.

In total, 270 usable responses were obtained, with 28 per cent ($n = 77$) in top management roles (e.g. CEO, vice president and chief marketing officer), 21 per cent ($n = 57$) senior managers and 35 per cent ($n = 136$) junior managers. The sample includes a range of sectors, including health care and social assistance (14 per cent, $n = 23$), professional services (26 per cent, $n = 43$), information and communication technology (ICT) (26 per cent, $n = 43$), manufacturing (24 per cent, $n = 40$) and education and public administration (10 per cent, $n = 17$). A large proportion of respondents (44 per cent) reported having worked in that same organization for six years or more. Table II summarizes the sample profile.

Measures

All constructs were operationalized with multi-item seven-point Likert scales based on existing literature. Following an in-depth review of the literature and exploratory pre-test interviews, some modifications were made to items. Pre-test interviews were conducted with managers and DCs scholars to provide feedback on any difficult questions, inappropriate or sensitive questions, general structure and the layout of the questionnaire. Subsequently, minor modifications were made to the wording of the questionnaire to reduce potential measurement errors.

Proactive MO is measured with items adopted from Narver *et al.* (2004) and Blocker *et al.* (2011). *Value innovation* was measured with items developed by Berghman *et al.* (2012). *Operational marketing capabilities* were captured using four dimensions (i.e. *pricing*, *channel management*, *marketing research* and *marketing implementation*) borrowed from Vorhies and Morgan (2005) and Prašnikar *et al.* (2008). Three dimensions were used to measure *induced market turbulence*, namely, *lobbying* developed on the basis of PEST (political, economic, social and technological) framework (Wilson and Gilligan, 2005), *change of market structure* and *change of market behavior* (Blut *et al.*, 2013). Last, *organizational outcomes* were measured in terms of *customer value* (adapted from studies by Nasution and Mavondo, 2008; Sweeney and Soutar, 2001; and Ruiz *et al.*, 2010), *market effectiveness* and *profitability* (Vorhies and Morgan, 2005). To prevent under-or overestimating the effect of the variables of interest as a result of missing variables, we included sales turnover as a proxy for organization size as a control variable. It was included because organizational size may potentially influence performance outcomes (Wiklund and Shepherd, 2005). A list of all items is provided in Appendix 2.

Characteristic	Variation	Count	(%)
Organization type	Privately owned	127	47.0
	Publicly owned	107	39.6
	Partnership	13	4.8
	Other	16	5.9
Industry sector	Health care and social assistance	23	13.9
	Professional services	43	25.9
	ICT	43	25.9
	Manufacturing	40	24.1
	Education and public administration	17	10.2
Turnover	Less than A$1m	19	7.0
	A$1-2m	9	3.3
	A$3-10m	17	6.3
	A$11-50m	36	13.3
	A$51-200m	51	18.9
	A$201m or more	77	28.5
	Prefer not to say	48	17.8
Years in position	10 years or less	213	81.0
	11-15 years	16	6.1
	16-20 years	15	5.7
	More than 20 years	19	7.2
Years respondent has been in the organization	10 years or less	218	82.9
	11-15 years	27	10.0
	16-20 years	11	4.1
	More than 20 years	7	2.6
Gender	Female	53	19.6
	Male	203	75.2

Table II. Respondents and organizations' profiles

Data analysis strategy

Exploratory factor analysis (EFA) was conducted using SPSS to establish the unidimensionality of constructs (Clark and Watson, 1995). The Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were performed to examine the suitability of EFA. Next, confirmatory factor analysis was conducted utilizing AMOS to determine whether the hypothesized factors were supported by the data (Hair *et al.*, 2014) and to test convergent validity and discriminant validity (Churchill and Iacobucci, 2002). Structural equation modeling (SEM) was used to test hypotheses by applying AMOS. This step included measurement model assessment and structural model assessment (Schumacker and Lomax, 2010). The measurement model assessment was performed to verify the fit of observed variables to latent variables, while the structural model assessment tests the hypothesized relationships (Arbuckle, 2011).

In the next step, hypotheses were tested using multi-mediation analysis. Multi-mediation was performed using SEM to examine multiple relationships among variables simultaneously (Bagozzi and Yi, 1988) and to decrease the probability of parameter bias as a result of omitted variables (Preacher and Hayes, 2008). Moreover, following Malhotra *et al.*'s (2014) recommendation, individual indirect effects were examined to gain further and richer insights. In complex models with multiple mediators, the calculation of individual indirect effect is very complex (Preacher and Selig, 2012). To do so, the Monte Carlo simulation method was applied. The Monte Carlo simulation method provides evidence for each individual indirect effect rather than the total indirect effect (Preacher and Selig, 2012). This method has increasingly been attracting the interest of marketing (Zhang *et al.*, 2009) and

management (LePine *et al.*, 2016) scholars. This method has the benefit of superior statistical power while decreasing the possibility of Type I error (MacKinnon *et al.*, 2004; Preacher and Hayes, 2008). Moreover, this method produces a more precise confidence interval as a result of smoothness of the sampling distribution (Preacher and Selig, 2012). The performance of this method is comparable to the bootstrapping and other top-performing methods (Preacher and Selig, 2012) and substantially more precise than Sobel test (MacKinnon *et al.*, 2004).

In this method, the parameter estimates of the regression coefficients of the relationships between independent variable, mediator and dependent variable and their related asymptotic variances and covariance are used. Random draws from the mutual distribution of direct effects are simulated, and these values are multiplied together. This process is reiterated many times to estimate the distribution of indirect effect and confidence interval associated with the indirect effect (Selig and Preacher, 2008). Rstudio, an open-source environment for the R programing language, was applied to calculate Monte Carlo simulated confidence interval of indirect effects.

Results

Measurement model assessment

A satisfactory fit between the data and the measurement model were indicated by measurement model fit statistics ($\chi^2 = 2228.45$, df = 1202, $\chi^2/df = 1.854$, CFI = 0.930, TLI = 0.922, RMSEA = 0.056 and SRMR = 0.049). χ^2/df values are close to 1, signifying acceptable fit (Carmines and McIver, 1983), TLI and CFI values are above 0.9, representing well-fitting models (Hair *et al.*, 2014), RMSEA value is less than 0.8, indicating fair fit (Browne and Cudeck, 1993), and SRMR value is less than 0.8, showing a good fit (Hu and Bentler, 1999).

Table III shows the internal consistency of measures, including composite reliability, average variance extracted (AVE), correlations among the latent factors and square roots of AVE. Item loading on respective latent factors are significantly higher than zero at the 0.001 level (two-tailed). The values of AVE are above 0.50, which confirms the convergent validity (Hair *et al.*, 2014). The square root of AVE of each construct is compared to its correlation with other constructs to evaluate discriminant validity. When square root of AVE is higher than the correlation, this confirms discriminant validity (Hair *et al.*, 2014; Fornell and Larcker, 1981). The calculated Cronbach's alpha values exceed the level recommended by Nunnally (1978). Moreover, composite reliabilities are all well above 0.6, confirming the reliability of scales (Bagozzi and Yi, 1988).

To minimize common method variance (CMV), independent and dependent variables were separated by applying a marker variable, and the anonymity of respondents was assured. Items were carefully adapted and adjusted or developed and then refined through interviews and a pilot study as recommended by Podsakoff *et al.* (2003). Post hoc assessment of CMV was performed using the marker-variable technique (Lindell and Whitney, 2001; Malhotra *et al.*, 2006). "Work-family conflict" was selected as the marker variable and was placed just before the dependent variables in the questionnaire. Work-family conflict is theoretically distinct from the primary constructs under study. The smallest positive correlation between marker variable and central constructs is selected as a proxy for CMV (Lindell and Whitney, 2001); then CMV-adjusted correlations and *t*-statistics are calculated (Malhotra *et al.*, 2006). The result of this test showed that none of 66 uncorrected significant correlations became non-significant after controlling for CMV. This indicated that CMV might not be an issue in this research.

Table III.
Internal consistency of measures

Scales	1	2	3	4	5	6	7	8	9	10	11	12	13
1- Proactive MO	*0.81*	0.70**	0.46**	0.45**	0.64**	0.57**	0.7**	0.53**	0.33**	0.55**	0.47**	0.53**	0.01
2- Value innovation	0.71**	*0.85*	0.51**	0.61**	0.65**	0.66**	0.74**	0.64**	0.32**	0.7**	0.49**	0.6**	0.07
3- Pricing	0.47**	0.52**	*0.84*	0.61**	0.62**	0.52**	0.56**	0.62**	0.44**	0.55**	0.55**	0.51**	0.09
4- Channel management	0.47**	0.62**	0.62**	*0.91*	0.62**	0.58**	0.6**	0.63**	0.39**	0.59**	0.53**	0.51**	0.22*
5- Marketing research	0.65**	0.66**	0.63**	0.63**	0.85	0.75**	0.74**	0.72**	0.51**	0.56**	0.51**	0.56**	0.02
6- Marketing implementation	0.58**	0.67**	0.53**	0.60**	0.75**	*0.91*	0.58**	0.59**	0.42**	0.53**	0.5**	0.57**	0.04
7- Market behavior change	0.71**	0.75**	0.58**	0.62**	0.75**	0.59**	*0.85*	0.72**	0.46**	0.65**	0.57**	0.6**	0.00
8- Market structure change	0.54**	0.65**	0.63**	0.64**	0.73**	0.6**	0.73**	*0.83*	0.59**	0.49**	0.5**	0.54**	0.01
9- Lobbying	0.35**	0.34**	0.45**	0.41**	0.52**	0.44**	0.47**	0.61**	*0.82*	0.29**	0.4**	0.38**	−0.05
10- Customer value	0.56**	0.71**	0.57**	0.6**	0.57**	0.55**	0.66**	0.5**	0.31**	*0.83*	0.59**	0.7**	0.05
11- Profitability	0.48**	0.51**	0.56**	0.54**	0.52**	0.51**	0.58**	0.52**	0.42**	0.6**	*0.92*	0.78**	0.07
12- Market effectiveness	0.55**	0.61**	0.52**	0.52**	0.57**	0.58**	0.61**	0.56**	0.4**	0.71**	0.79**	*0.86*	0.01
13- Work family conflict	0.04	0.10	0.12	0.25**	0.05	0.07	0.03	0.04	−0.02	0.08	0.10	0.04	*0.91*
Cronbach's alpha	0.89	0.88	0.92	0.96	0.90	0.94	0.94	0.90	0.93	0.91	0.84	0.91	0.92
Composite reliability	0.88	0.91	0.90	0.96	0.91	0.95	0.93	0.92	0.91	0.90	0.96	0.92	0.94
AVE	0.66	0.72	0.70	0.82	0.72	0.83	0.72	0.69	0.67	0.69	0.85	0.74	0.83
MSV	0.51	0.56	0.40	0.41	0.57	0.57	0.56	0.53	0.37	0.51	0.62	0.62	0.06
ASV	0.29	0.36	0.29	0.31	0.38	0.32	0.38	0.35	0.18	0.31	0.28	0.32	0.01

Notes: Entries on diagonal are the square root of AVE and bottom off-diagonal figures are correlations. Top off-diagonal values are adjusted correlations; *$p < 0.1$; **$p < 0.5$; ***$p < 0.01$

Direct effects analysis

Our structural model shows acceptable fit to the data (χ^2 = 706.64, df = 312, χ^2/df = 2.265, CFI = 0.937, TLI = 0.930, RMSEA = 0.069 and SRMR = 0.056). The results suggest that there is no direct relationship between DMCs and organizational outcomes. First, following McDonald and Ho's (2002) recommendation, model modification indices indicate that there is no significant direct relationship between DMCs and organizational outcomes. Second, a competing model by adding direct relationships was developed and tested. Goodness-of-fit indices of competing model substantially decreased when compared to the hypothesized model. Moreover, computing χ^2 difference test of models fit, hypothesized model fit was significantly better than the competing model with a direct relationship. The results indicate that the control variable of organization size does not have a significant effect on customer value ($\beta = -0.020$, $p = 0.690$) and market effectiveness ($\beta = -0.016$, $p = 0.754$). There is only a marginally significant effect on profitability ($\beta = 0.098$, $p = 0.045$). However, controlling for turnover does not significantly affect the relationship between the variables of interest; thus, it is not included in the rest of analysis. Table IV shows the results of hypotheses testing for direct relationships.

Results indicate a significant positive effect of the proactive MO on operational marketing capabilities (*H1a*: $\beta = 0.336$, $p < 0.001$). A superior proactive MO provides organizations with knowledge about the evolution of their industry sector. By implementing this knowledge, organizations discover potential opportunities and discover deficiencies in existing capabilities, thereby enabling them to better reconfigure their capabilities. Another interesting finding of this research is the significant positive effect of value innovation on operational marketing capabilities (*H1b*: $\beta = 0.704$, $p < 0.001$). By engaging in value innovation activities, organizations create new value for customers in innovative and non-traditional ways. To benefit from new forms of customer value, organizations need to develop new ways to deliver (this) value to customers.

A further important finding of this research confirms that there is a significant positive effect of operational marketing capabilities on customer value (*H2a*: $\beta = 0.239$, $p < 0.001$), profitability (*H2b*: $\beta = 0.161$, $p < 0.001$) and market effectiveness (*H2c*: $\beta = 0.560$, $p < 0.001$). This finding supports a number of previous findings on the relationship between marketing capabilities and organizational outcomes (Krasnikov and Jayachandran, 2008; Wang *et al.*, 2004; Santos-Vijande *et al.*, 2012); in particular, it supports the notion that

Table IV. Results of hypotheses testing – direct

Hypothesis	Standardized effect	*t*-value	Conclusion
H1a: Proactive market orientation → operational marketing capabilities	0.336***	5.857	Supported
H1b: Value innovation → operational marketing capabilities	0.704***	8.852	Supported
H2a: Operational marketing capabilities → customer value	0.542***	5.825	Supported
H2b: Operational marketing capabilities → profitability	0.573***	6.464	Supported
H2c: Operational marketing capabilities → market effectiveness	0.560***	6.242	Supported
H5a: Proactive market orientation → induced market turbulence	0.403***	6.720	Supported
H5b: Value innovation → induced market turbulence	0.695***	8.880	Supported
H6a: Induced market turbulence → customer value	0.239**	2.957	Supported
H6b: Induced market turbulence → profitability	0.161*	2.051	Supported
H6c: Induced market turbulence → market effectiveness	0.211**	2.648	Supported

Notes: *$p < 0.1$; **$p < 0.5$; ***$p < 0.01$

marketing capabilities empower organizations to create sustainable bonds with their customers, attain competitive advantage and achieve superior performance.

The results indicate that proactive MO has a significant positive effect on induced market turbulence (*H5a*: $\beta = 0.403$, $p < 0.001$), confirming that a proactive MO is necessary not only to discover early indications of change in customer needs but also to determine customers' latent needs or even create new needs. Customers do not always know, and are not able to imagine, what they may want in future. Proactive market-oriented organizations are capable of influencing customers' perceptions by their own decisions and behaviors. Moreover, proactive market-oriented organizations may affect the structure of the market and alter the relationship among market players. For example, by anticipating the future needs of passengers, an aircraft manufacturer may consider larger airplanes that can travel farther, whereas another company may consider smaller, more efficient airplanes. However, their decisions influence other market players such as other airlines.

Another finding of this research is the significant positive effect of value innovation on induced market turbulence (*H5b*: $\beta = 0.695$, $p < 0.001$). In line with the literature (Garcia and Calantone, 2002; Berghman *et al.*, 2012), this finding confirms that value innovation initiates a turbulence in the market by altering the roles and relationships among industry players, thereby changing the structure of the market. Unlike product innovation that is often relatively easy to imitate and reproduce, value innovation produces an entirely new system that competitors find difficult to imitate (Amit and Zott, 2012). For example, by implementing an innovative business model, the organization may influence the market evolution by forming strategic alliances or aggressive acquisitions, which is difficult if not impossible for competitors to imitate.

The results confirm that there is a significant positive effect of induced market turbulence on customer value (*H6a*: $\beta = 0.69$, $p < 0.001$), profitability (*H6b*: $\beta = 0.71$, $p < 0.001$) and market effectiveness (*H6c*: $\beta = 0.211$, $p < 0.001$). DCs assist organizations to create their future path (Arthur, 1989) by engaging in environment of construction activities. This capability is entrepreneurial in nature and heterogeneously distributed among firms (Teece, 2007); hence, it is a potential source of competitive advantage (Kumar *et al.*, 2000). This is consistent with institutional theory suggesting that organizations that have the superior capability to manipulate and shape the fundamental values of important players in their environment obtain more power (Oliver and Holzinger, 2008; Scott, 2001). Consider an organization that develops a new product that activates the unstated needs of customers, such as the first firm that produced lactose-free milk. The new product, by creating a leap in customer value, caused some customers to reconsider their preferences. In this way, an organization can redefine and shape customer perceptions about product attributes and norms. This kind of strategy may provide a competitive advantage, which is costly for competitors to imitate or even avoid (Oliver and Holzinger, 2008).

Mediated effects analysis

In this research, the parameter estimates and associated asymptotic variances and covariance are extracted from AMOS output after running the structural model. Then, RStudio is used to calculate the Monte Carlo confidence interval of indirect effects, following the procedures provided by Selig and Preacher (2008). To test individual indirect effects, Monte Carlo confidence intervals were created on the basis of simulated draws from pathway parameters of the model. Confidence intervals that do not include zero indicate the significance of the examined indirect effects (Shrout and Bolger, 2002). For each indirect effect and confidence interval (90, 95 and 99 per cent), the reiteration is set at 20,000. Table V summarizes the results of confidence intervals, and the full analysis is shown in Appendix 1.

Table V.
Results of hypotheses testing – mediated

Hypothesis	Unstandardized estimates	Standard deviation	Critical ratio	Conclusion
H3a: Proactive MO → operational marketing capabilities → customer value	0.107***	0.023	4.65	Supported
H3b: Proactive MO → operational marketing capabilities → profitability	0.188***	0.041	4.61	Supported
H3c: Proactive MO → operational marketing capabilities → market effectiveness	0.170***	0.037	4.63	Supported
H4a: Value innovation → operational marketing capabilities → customer value	0.234***	0.046	5.14	Supported
H4b: Value innovation → operational marketing capabilities → profitability	0.411***	0.069	5.92	Supported
H4c: Value innovation → operational marketing capabilities → market effectiveness	0.371***	0.063	5.87	Supported
H7a: Proactive MO → induced market turbulence → customer value	0.056***	0.021	2.63	Supported
H7b: Proactive MO → induced market turbulence → profitability	0.063**	0.032	1.96	Supported
H7c: Proactive MO → induced market turbulence → market effectiveness	0.076***	0.032	2.41	Supported
H8a: Value innovation → induced market turbulence → customer value	0.102***	0.037	2.73	Supported
H8b: Value innovation → induced market turbulence → profitability	0.114**	0.057	2.00	Supported
H8c: Value innovation → induced market turbulence → market effectiveness	0.138***	0.052	2.63	Supported

Notes: **$p < 0.05$; ***$p < 0.01$

The results indicate that operational marketing capabilities mediate the relationship between proactive MO and customer value (*H3a*: $\beta = 0.107$, $p < 0.01$), profitability (*H3b*: $\beta = 0.188$, $p < 0.01$) and market effectiveness (*H3c*: $\beta = 0.170$, $p < 0.01$). The indirect effect of value innovation on customer value (*H4a*: $\beta = 0.234$, $p < 0.01$), profitability (*H4b*: $\beta = 0.411$, $p < 0.01$) and market effectiveness (*H4c*: $\beta = 0.371$, $p < 0.01$) is mediated by operational marketing capabilities. The application of marketing capabilities in a harmonious way at the strategic and operational levels, such as the development of the marketing mix policies and flexible planning, enables an organization to achieve competitive advantage (Santos-Vijande *et al.*, 2012). These findings confirm that DMCs impact organizational outcomes indirectly through operational marketing capabilities. In other words, DMCs support and improve the development and configuration of operational marketing capabilities, which in turn underpin superior organizational outcomes. This conclusion is consistent with recent empirical research in the DCs domain (Protogerou *et al.*, 2012). Therefore, competitive advantage and superior organizational outcomes are not the direct results of DMCs; rather, they are achieved through the creation and reconfiguration of operational capabilities. This finding also provides empirical support for the conceptual challenge of differentiating between dynamic and operational (marketing) capabilities. Therefore, DMCs comprise higher-order capabilities that create and renew operational marketing capabilities; however, effective operational marketing capabilities are required for superior outcomes. This supports prior research proposing that DCs play a role in changing resources and capabilities (Ambrosini and Bowman, 2009; Eisenhardt and Martin, 2000; Teece *et al.*, 1997; Zahra *et al.*, 2006).

The results also indicate that induced market turbulence mediates the relationship between proactive MO and customer value (*H7a*: $\beta = 0.056$, $p < 0.01$), profitability (*H7b*: $\beta = 0.063$, $p < 0.05$) and market effectiveness (*H7c*: $\beta = 0.078$, $p < 0.05$). Moreover, the indirect effects of value innovation on customer value (*H8a*: $\beta = 0.102$, $p < 0.01$), profitability (*H8b*: $\beta = 0.114$, $p < 0.05$) and market effectiveness (*H8c*: $\beta = 0.138$, $p < 0.01$) are mediated by induced market turbulence. The findings are consistent with the theoretical discussion regarding DCs, confirming DCs are necessary "[. . .] to match and even create market change" (Eisenhardt and Martin, 2000) and to address and shape the rapidly changing environment (Teece, 2014). These findings indicate that DMCs facilitate inducing turbulence in the market and shape the competitive landscape. Organizations capable of shaping the market are able to achieve outcomes that are more favorable to themselves. For example, British Petroleum proactively shaped the beliefs of policy-makers about acceptable pollution standards in the 1990s and redefined the standards. This created significant costs for unprepared rivals (McWilliams *et al.*, 2002). This indicates that organizations with enhanced DMCs are able to initiate market disruption and achieve superior performance. This is consistent with existing literature on niche construction (Luksha, 2008), effectuation (Sarasvathy, 2001; Sarasvathy, 2008) and market-driving (Jaworski *et al.*, 2000; Kumar *et al.*, 2000).

Discussion

Theoretical contributions

This study contributes in several ways to the literature of DCs, and specifically DMCs. First, by proposing an integrative conceptual framework after an extensive review of the literature, this research explains the mechanism by which DMCs are linked to organizational outcomes. This framework and the proposed relationships provide a more comprehensive explanation for complementary strategies to achieve superior outcomes than has been suggested to date. This framework could be a starting point for further empirical research.

This framework also facilitates the reconciling of DMCs and DCs, which helps to resolve the debate about whether marketing capabilities can be truly dynamic in nature (Day, 2011).

Second, this study incorporates inducing turbulence in the market to DCs literature. Prior to this article, the literature to explain the effect of DCs on organizational outcomes implied a path through reconfiguration of operational capabilities. However, scholars believe that it is necessary to study the role of DCs in interacting with and shaping the environment (Wilden *et al.*, 2016). In this framework, we offer an alternative and complementary explanation by proposing creating market change rather than matching the environment. Inducing turbulence in the market is consistent with creating disruption in the market. Christensen (1997) argues that disruptive innovation occurs when a new market and value network are created as a result of innovation. This innovation eventually disrupts the existing market and causes the established leaders and alliances to be replaced. In this way, an entirely new performance trajectory for the business is established (Christensen *et al.*, 2003). The proposed framework is also in line with the market-driving perspective, which suggests that firms can and do induce turbulence in the market and change the behavior of other players (Jaworski *et al.*, 2000). By doing so, they generate market disequilibrium (D'Aveni, 1999) to achieve superior performance for their businesses. In DCs literature, it is argued that DCs are developed to create market change (Eisenhardt and Martin, 2000) and shape opportunities (Teece, 2007). However, very few studies have investigated the impact of deliberately inducing turbulence in the market in terms of its relationship with organizational performance for the disturbance creator (Oliver and Holzinger, 2008).

Third, this study re-emphasizes the role of operational marketing capabilities in mediating the relationship between DMCs and organizational performance. Dynamic and operational (marketing) capabilities differ according to the nature of the activities they support. Operational capabilities help an organization to perform its ongoing activities to maintain the status quo (Winter, 2003). On the other hand, DCs are primarily strategic (Teece *et al.*, 1997), underpin the evolution and development path of an organization's capabilities (Zahra and George, 2002) and play a critical role of configuring resources and capabilities (Ambrosini and Bowman, 2009; Eisenhardt and Martin, 2000). Thus, organizations with superior DMCs will be capable of reconfiguring operational marketing capabilities more effectively and efficiently, thereby achieving enhanced organizational outcomes.

Fourth, most studies into DCs are largely theoretical (Wilden and Gudergan, 2015) or discuss DCs in general; only a few concentrate on specific DCs, particularly in extant marketing literature. In this research, two distinct DMCs – proactive MO and value innovation – are conceptualized, measured and validated and are found to have robust psychometric properties. These DMCs fulfill the requirements described by Barrales-Molina *et al.* (2014). The findings of this research suggest that these DMCs perform as theoretically predicted. This extends the discussion beyond generic "DCs" by providing robust, actionable measures that academics can use and validate for their generalizability to other contexts.

Managerial implications

The findings of this study present several potential implications for managers. First, managers are encouraged to invest in developing DMCs as a strategic rather than tactical approach. Many managers are aware of the DCs concept; however, not many of them have developed a broad perception of it (Barrales-Molina *et al.*, 2014). However, this study shows that DCs help organizations to reconfigure their accumulated operational capabilities and must be seen as future-oriented. If managers misperceive market environment, they might

initiate inappropriate DCs which do not enhance performance (Ambrosini and Bowman, 2009), as DCs may be costly in their development and deployment. The critical issue is to develop and deploy DCs in a timely manner and under appropriate conditions. For example, Nokia's focus on design and engineering, as well as the capability of timely anticipating customer needs (i.e. through the introduction of the "Communicator", the world's first smartphone in 1996), earned it a dominant position in mobile phone industry in late 90's (CNN Money, 1998). However, a decade later, Nokia lost to its competition, with the criticism phone models N97 and N8 received, because of poor customer experience, firmware and Web access. This emphasizes that DMCs need to continuously monitored for their effectiveness in dynamic markets.

This study focuses on specific capabilities that are generalizable and potentially needed by most businesses, i.e. proactive MO and value innovation. The measures developed for the two DMCs provide managers with specific tools to evaluate themselves and compare with their main competitors. This means DCs are no longer abstract and mysterious as they can be measured and related to business performance. This advances studies from the generic term "DCs" into concrete measures that managers can measure and implement.

This study further highlights the fact that in ambiguous environments, organizations need not just adapt to the environment as opportunities may come from environmental construction or changing the gameplay, which we have called value innovation and inducing market turbulence. This is focusing on market-driving strategies that can create a new value for their customers and disrupt the advantages of current incumbents. For example, instead of following the traditional hotel industry recipes, Airbnb started as a personal website with pictures of a loft (turned into a lodging space), three air-mattresses on the floor and the promise of a home-cooked breakfast. The founders wisely created their niche and enjoyed an estimated $900m annual revenue, eight years later in 2015 (Kokalitcheva, 2015). Firms that can develop and deploy the capability of inducing market turbulence and enhance their value innovation will out-compete rather than out-perform their competitors. This study provides managers with insights as to what is value innovation and how it can be created and related to performance outcomes. Thus, this study provides managers with actionable tools that are specific, robust and easily applied.

Limitations and future research directions

Despite conceptual and methodological strengths, this study has some limitations, and the findings and suggested implications should be interpreted in light of these limitations. These limitations, though, offer opportunities for future research. This study used cross-sectional data, but it is recognized that DMCs are developed over time, and studying them with cross-sectional data gives only a snapshot of the current condition of the organization. It is argued that future studies would benefit from adopting a longitudinal approach, as cross-sectional studies cannot show the chronological development of DMCs and operational capabilities and their effects on performance. However, this research relies on the fact that DCs are path-dependent (Teece *et al.*, 1997; Zollo and Winter, 2002), and current conditions reflect prior paths and decisions. While the model was consistent with existing literature, one cannot claim to establish cause and effect but rather the associations as suggested in the literature.

Moreover, a self-reported questionnaire was used in this research. The researchers made considerable efforts to ensure the quality of data through the survey design, the data collection process and survey validations; however, there is a possibility of bias. By controlling for common method bias, this limitation was minimized. It is also noted that sometimes, the perceptions of key informants may not match the reality in the whole company. It is suggested

that future research could consider data source triangulation by having several respondents from each organization and validating this with archival records. In addition, our sample consists of managers working in Australia. Using a broader cross-section of managers from other countries could provide generalizability of our findings.

References

Ambrosini, V. and Bowman, C. (2009), "What are dynamic capabilities and are they a useful construct in strategic management? ", *International Journal of Management Reviews*, Vol. 11 No. 1, pp. 29-49.

Amit, R. and Zott, C. (2012), "Creating value through business model innovation", *MIT Sloan Management Review*, Vol. 53, pp. 41-49.

Arbuckle, J.L. (2011), *IBM SPSS Amos 20 User's Guide*, IBM Corporation.

Arthur, W.B. (1989), "Competing technologies, increasing returns, and lock-in by historical events", *The Economic Journal*, Vol. 99 No. 394, pp. 116-131.

Atuahene-Gima, K. (2005), "Resolving the capability: rigidity paradox in new product innovation", *Journal of Marketing*, Vol. 69 No. 4, pp. 61-83.

Audia, P.G., Locke, E.A. and Smith, K.G. (2000), "The paradox of success: an archival and a laboratory study of strategic persistence following radical environmental change", *Academy of Management Journal*, Vol. 43 No. 5, pp. 837-853.

Baden-Fuller, C. and Pitt, M. (1996), *Strategic Innovation*, Routledge, London.

Baden-Fuller, C. and Stopford, J.M. (1994), *Rejuvenating the Mature Business: The Competitive Challenge*, Harvard Business Review Press.

Bagozzi, R.P. and Yi, Y. (1988), "On the evaluation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 16 No. 1, pp. 74-94.

Barney, J.B. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.

Barrales-Molina, V., Martínez-López, F.J. and Gázquez-Abad, J.C. (2014), "Dynamic marketing capabilities: toward an integrative framework", *International Journal of Management Reviews*, Vol. 16 No. 4, pp. 397-416.

Barreto, I. (2010), "Dynamic capabilities: a review of past research and an agenda for the future", *Journal of Management*, Vol. 36 No. 1, pp. 256-280.

Berghman, L., Matthyssens, P. and Vandenbempt, K. (2012), "Value innovation, deliberate learning mechanisms and information from supply chain partners", *Industrial Marketing Management*, Vol. 41 No. 1, pp. 27-39.

Bingham, C.B., Heimeriks, K.H., Schijven, M. and Gates, S. (2015), "Concurrent learning: how firms develop multiple dynamic capabilities in parallel", *Strategic Management Journal*, Vol. 36 No. 12, pp. 1802-1825.

Blocker, C.P., Flint, D.J., Myers, M.B. and Slater, S.F. (2011), "Proactive customer orientation and its role for creating customer value in global markets", *Journal of the Academy of Marketing Science*, Vol. 39 No. 2, pp. 216-233.

Blut, M., Holzmüller, H.H. and Stolper, M. (2013), "Market shaping orientation and firm performance", in Fritz, W., Diamantopoulos, A. and Hildebrandt, L. (Eds), *Quantitative Marketing and Marketing Management*, Gabler Verlag, Wiesbaden.

Browne, M.W. and Cudeck, R. (1993), "Alternative ways of assessing model fit", in Bollen, K.A. and Long, J.S. (Eds), *Testing Structural Equation Models*, Sage Publications, Newbury Park, CA.

Bruni, D.S. and Verona, G. (2009), "Dynamic marketing capabilities in science-based firms: an exploratory investigation of the pharmaceutical industry", *British Journal of Management*, Vol. 20, pp. S101-S117.

Cacciolatti, L. and Lee, S.H. (2016), "Revisiting the relationship between marketing capabilities and firm performance: the moderating role of market orientation, marketing strategy and organisational power", *Journal of Business Research*, Vol. 69 No. 12, pp. 5597-5610.

Carmines, E.G. and Mciver, J.P. (1983), "An introduction to the analysis of models with unobserved variables", *Political Methodology*, Vol. 9, pp. 51-102.

Chandler, D. and Werther, W.B. Jr (2014), *Strategic Corporate Social Responsibility: Stakeholders in a Global Environment*, Sage publications.

Christensen, C.M. (1997), *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*, Harvard Business Review Press, Boston, MA.

Christensen, C.M., Raynor, M.E. and Anthony, S.D. (2003), "Six keys to creating new-growth businesses", *Harvard Management Update*, Vol. 8, pp. 3-6.

Churchill, G.A. and Iacobucci, D. (2002), *Marketing Research*, Harcourt College Publishers, Florida.

Clark, L.A. and Watson, D. (1995), "Constructing validity: basic issues in objective scale development", *Psychological Assessment*, Vol. 7 No. 3, pp. 309-319.

CNN Money (1998), *Nokia overtakes Motorola*, available at: http://money.cnn.com/1999/02/08/europe/nokia/ (accessed 9 October 2017).

Collis, D.J. (1994), "Research note: how valuable are organizational capabilities?", *Strategic Management Journal*, Vol. 15 No. S1, pp. 143-152.

D'aveni, R.A. (1999), "Strategic supremacy through disruption and dominance", *Sloan Management Review*, Vol. 40, pp. 127-136.

Daft, R.L. and Weick, K.E. (1984), "Toward a model of organizations as interpretation systems", *Academy of Management Review*, Vol. 9 No. 2, pp. 284-295.

Day, G.S. (1994), "The capabilities of market-driven organizations", *Journal of Marketing*, Vol. 58 No. 4, pp. 37-52.

Day, G.S. (2011), "Closing the marketing capabilities gap", *Journal of Marketing*, Vol. 75 No. 4, pp. 183-195.

De Clercq, D., Thongpapanl, N. and Voronov, M. (2015), "Sustainability in the face of institutional adversity: market turbulence, network embeddedness, and innovative orientation", *Journal of Business Ethics*, pp. 1-19, doi: 10.1007/s10551-015-3004-7.

Drucker, P.F. (1974), *Management: Tasks, Responsibilities, Practices*, Truman Talley Books, New York, NY.

Dutta, S., Zbaracki, M.J. and Bergen, M. (2003), "Pricing process as a capability: a resource-based perspective", *Strategic Management Journal*, Vol. 24 No. 7, pp. 615-630.

Easterby-Smith, M., Lyles, M.A. and Peteraf, M.A. (2009), "Dynamic capabilities: current debates and future directions", *British Journal of Management*, Vol. 20, pp. S1-S8, doi: 10.1111/j.1467-8551.2008.00609.x.

Eisenhardt, K.M. and Martin, J.A. (2000), "Dynamic capabilities: what are they?", *Strategic Management Journal*, Vol. 21 Nos 10/11, pp. 1105-1121.

Ellis, P.D. (2006), "Market orientation and performance: a Meta-analysis and cross-national comparisons", *Journal of Management Studies*, Vol. 43 No. 5, pp. 1089-1107.

Eriksson, T. (2014), "Processes, antecedents and outcomes of dynamic capabilities", *Scandinavian Journal of Management*, Vol. 30 No. 1, pp. 65-82.

Fang, E.E. and Zou, S. (2009), "Antecedents and consequences of marketing dynamic capabilities in international joint ventures", *Journal of International Business Studies*, Vol. 40 No. 5, pp. 742-761.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 18 No. 1, pp. 39-50.

Garcia, R. and Calantone, R. (2002), "A critical look at technological innovation typology and innovativeness terminology: a literature review", *Journal of Product Innovation Management*, Vol. 19 No. 2, pp. 110-132.

Griffith, D.A. and Harvey, M.G. (2001), "A resource perspective of global dynamic capabilities", *Journal of International Business Studies*, pp. 597-606.

Gruley, B. 2013, *At Chobani, the Turkish King of Greek Yogurt*, available at: www.bloomberg.com/news/articles/2013-01-31/at-chobani-the-turkish-king-of-greek-yogurt (accessed 9 October 2017).

Hair, J.F., Black, W.C., Babin, B.J. and Anderson, R.E. (2014), *Multivariate Data Analysis*, Pearson.

Helfat, C.E., Finkelstein, S., Mitchell, W., Peteraf, M.A., Singh, H., Teece, D. and Winter, S.G. (2007), *Dynamic Capabilities: Understanding Strategic Change in Organizations*, Blackwell, London.

Hills, S.B. and Sarin, S. (2003), "From marke driven to market driving: an alternate paradigm for marketing in high technology industruies", *Journal of Marketing Theory and Practice*, Vol. 11 No. 3, pp. 13-24.

Hu, L.T. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives", *Structural Equation Modeling: A Multidisciplinary Journal*, Vol. 6 No. 1, pp. 1-55.

Jantunen, A., Puumalainen, K., Saarenketo, S. and Kyläheiko, K. (2005), "Entrepreneurial orientation, dynamic capabilities and international performance", *Journal of International Entrepreneurship*, Vol. 3 No. 3, pp. 223-243.

Jaworski, B.J., Kohli, A.K. and Sahay, A. (2000), "Market-driven versus driving markets", *Journal of the Academy of Marketing Science*, Vol. 28 No. 1, pp. 45-54.

Kachouie, R. and Sedighadeli, S. (2015), "New product development success factors in prospector organizations; mixed method approach", *International Journal of Innovation Management*, Vol. 19 No. 4, p. 1550040.

Kerin, R.A., Varadarajan, P.R. and Peterson, R.A. (1992), "First-mover advantage: a synthesis, conceptual framework, and research propositions", *The Journal of Marketing*, Vol. 56 No. 4, pp. 33-52.

Kim, W.C. and Mauborgne, R. (1997), *Value Innovation: The Strategic Logic of High Growth*, Harvard Business School Publisher.

Kim, W.C. and Mauborgne, R. (1999), "Strategy, value innovation, and the knowledge economy", *Sloan Management Review*, Vol. 40, pp. 41-54.

Kokalitcheva, K. 2015. *Here's How Airbnb Justifies its Eye-Popping $24 Billion Valuation*, Time Inc, available at: http://fortune.com/2015/06/17/airbnb-valuation-revenue/ (accessed 8 October 2017).

Kotler, P. (2011), *Marketing Insights from a to Z: 80 Concepts Every Manager Needs to Know*, John Wiley & Sons.

Krasnikov, A. and Jayachandran, S. (2008), "The relative impact of marketing, research-and-development, and operations capabilities on firm performance", *Journal of Marketing*, Vol. 72 No. 4, pp. 1-11.

Kumar, N., Scheer, L. and Kotler, P. (2000), "From market driven to market driving", *European Management Journal*, Vol. 18 No. 2, pp. 129-142.

Laaksonen, O. and Peltoniemi, M. (2016), "The essence of dynamic capabilities and their measurement", *International Journal of Management Reviews*, doi: 10.1111/ijmr.12122.

Landroguez, S.M., Castro, C.B. and Cepeda-Carrión, G. (2011), "Creating dynamic capabilities to increase customer value", *Management Decision*, Vol. 49, pp. 1141-1159.

Lavie, D. (2006), "Capability reconfiguration: an analysis of incumbent responses to technological change", *Academy of Management Review*, Vol. 31 No. 1, pp. 153-174.

Lepine, M.A., Zhang, Y., Crawford, E.R. and Rich, B.L. (2016), "Turning their pain to gain: charismatic leader influence on follower stress appraisal and job performance", *Academy of Management Journal*, Vol. 59 No. 3, pp. 1036-1059.

Levinthal, D. and Myatt, J. (1994), "Co-evolution of capabilities and industry: the evolution of mutual fund processing", *Strategic Management Journal*, Vol. 15 No. S1, pp. 45-62.

Lindell, M.K. and Whitney, D.J. (2001), "Accounting for common method variance in cross-sectional research designs", *Journal of Applied Psychology*, Vol. 86 No. 1, p. 114.

Luksha, P. (2008), "Niche construction: the process of opportunity creation in the environment", *Strategic Entrepreneurship Journal*, Vol. 2 No. 4, pp. 269-283.

Mcdonald, R.P. and Ho, M.-H.R. (2002), "Principles and practice in reporting structural equation analyses", *Psychological Methods*, Vol. 7 No. 1, p. 64.

Mcwilliams, A., Van Fleet, D.D. and Cory, K.D. (2002), "Raising rivals' costs through political strategy: an extension of resource-based theory", *Journal of Management Studies*, Vol. 39 No. 5, pp. 707-724.

Mackinnon, D.P., Lockwood, C.M. and Williams, J. (2004), "Confidence limits for the indirect effect: distribution of the product and resampling methods", *Multivariate Behavioral Research*, Vol. 39 No. 1, pp. 99-128.

Madhavaram, S. and Hunt, S. (2008), "The service-dominant logic and a hierarchy of operant resources: developing masterful operant resources and implications for marketing strategy", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 67-82.

Malhotra, M.K., Singhal, C., Shang, G. and Ployhart, R.E. (2014), "A critical evaluation of alternative methods and paradigms for conducting mediation analysis in operations management research", *Journal of Operations Management*, Vol. 32 No. 4, pp. 127-137.

Malhotra, N.K., Kim, S.S. and Patil, A. (2006), "Common method variance in IS research: a comparison of alternative approaches and a reanalysis of past research", *Management Science*, Vol. 52 No. 12, pp. 1865-1883.

Marsh, S.J. and Stock, G.N. (2003), "Building dynamic capabilities in new product development through intertemporal integration", *Journal of Product Innovation Management*, Vol. 20 No. 2, pp. 136-148.

Matthyssens, P., Vandenbempt, K. and Berghman, L. (2006), "Value innovation in business markets: breaking the industry recipe", *Industrial Marketing Management*, Vol. 35 No. 6, pp. 751-761.

Menguc, B. and Auh, S. (2006), "Creating a firm-level dynamic capability through capitalizing on market orientation and innovativeness", *Journal of the Academy of Marketing Science*, Vol. 34 No. 1, pp. 63-73.

Menguc, B and Barker, T. (2005), "Re-examining field sales unit performance: Insights from the resource-based view and dynamic capabilities perspective", *European Journal of Marketing*, Vol. 39 Nos 7/8, pp. 885-909.

Morgan, N.A., Vorhies, D.W. and Mason, C.H. (2009), "Market orientation, marketing capabilities, and firm performance", *Strategic Management Journal*, Vol. 30 No. 8, pp. 909-920.

Narver, J.C., Slater, S.F. and Maclachlan, D.L. (2004), "Responsive and proactive market orientation and new-product success", *Journal of Product Innovation Management*, Vol. 21 No. 5, pp. 334-347.

Nasution, H.N. and Mavondo, F.T. (2008), "Organisational capabilities: antecedents and implications for customer value", *European Journal of Marketing*, Vol. 42 Nos 3/4, pp. 477-501.

Nick, T. (2015), *Remembering Siemens: Notable Models from the Company's Cell Phone History*, available at: www.phonearena.com/news/Remembering-Siemens-notable-models-from-the-companys-cell-phone-history_id65453 (accessed 29 August 2017).

Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York, NY.

Oliver, C. and Holzinger, I. (2008), "The effectiveness of strategic political management: a dynamic capabilities framework", *Academy of Management Review*, Vol. 33 No. 2, pp. 496-520.

Pavlou, P.A. and El Sawy, O.A. (2011), "Understanding the elusive black box of dynamic capabilities", *Decision Sciences*, Vol. 42 No. 1, pp. 239-273.

Peteraf, M.A., Di Stefano, G. and Verona, G. (2013), "The elephant in the room of dynamic capabilities: bringing two diverging conversations together", *Strategic Management Journal*, Vol. 34 No. 12, pp. 1389-1410.

Pitt, M. and Clarke, K. (1999), "Competing on competence: a knowledge perspective on the management of strategic innovation", *Technology Analysis & Strategic Management*, Vol. 11 No. 3, pp. 301-316.

Podsakoff, P.M., Mackenzie, S.B., Lee, J.-Y. and Podsakoff, N.P. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903.

Prašnikar, J., Lisjak, M., Buhovac, A.R. and Štembergar, M. (2008), "Identifying and exploiting the inter relationships between technological and marketing capabilities", *Long Range Planning*, Vol. 41 No. 5, pp. 530-554.

Preacher, K.J. and Hayes, A.F. (2008), "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models", *Behavior Research Methods*, Vol. 40 No. 3, pp. 879-891.

Preacher, K.J. and Selig, J.P. (2012), "Advantages of monte carlo confidence intervals for indirect effects", *Communication Methods and Measures*, Vol. 6 No. 2, pp. 77-98.

Protogerou, A., Caloghirou, Y. and Lioukas, S. (2012), "Dynamic capabilities and their indirect impact on firm performance", *Industrial and Corporate Change*, Vol. 21 No. 3, pp. 615-647.

Rocha, H. and Birkinshaw, J. (2007), *Entrepreneurship Safari: A Phenomenon-Driven Search for Meaning*, Now Publishers.

Ruiz, D.M., Gremler, D.D., Washburn, J.H. and Carrión, G.C. (2010), "Reframing customer value in a service-based paradigm: an evaluation of a formative measure in a multi-industry, cross-cultural context", in Esposito, V.V., Chin, W.W., Henseler, J. and Wang, H. (Eds), *Handbook of Partial Least Squares: Concepts, Methods and Applications*, Springer, Berlin, Heidelberg.

Santos-Vijande, L., Sanzo-Pérez, M.J., Trespalacios Gutiérrez, J.A. and Rodríguez, N.G. (2012), "Marketing capabilities development in small and medium enterprises: implications for performance", *Journal of CENTRUM Cathedra: The Business and Economics Research Journal*, Vol. 5 No. 1, pp. 24-42.

Santos, F.M. and Eisenhardt, K.M. (2009), "Constructing markets and shaping boundaries: entrepreneurial power in nascent fields", *Academy of Management Journal*, Vol. 52 No. 4, pp. 643-671.

Sarasvathy, S.D. (2001), "Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency", *Academy of Management Review*, Vol. 26 No. 2, pp. 243-263.

Sarasvathy, S.D. (2008), *Effectuation: Elements of Entrepreneurial Expertise*, Edward Elgar Publishing.

Schumacker, R.E. and Lomax, R.G. (2010), *A Beginner's Guide to Structural Equation Modeling*, Taylor and Francis Group, New York, NY.

Schumpeter, J.A. (1934), *The Schumpttr: Theory Economic Development*, Harvard University Press, Cambridge.

Scott, W.R. (2001), *Institutions and Organizations*, Sage, Thousand Oaks, CA.

Sedighadeli, S. and Kachouie, R. (2013), "Managerial factors influencing success of new product development", *International Journal of Innovation Management*, Vol. 17 No. 5.

Selig, J.P. and Preacher, K.J. (2008), *Monte Carlo Method for Assessing Mediation: An Interactive Tool for Creating Confidence Intervals for Indirect Effects [Computer Software]*, available at: http://quantpsy.org/

Shrout, P.E. and Bolger, N. (2002), "Mediation in experimental and nonexperimental studies: new procedures and recommendations", *Psychological Methods*, Vol. 7 No. 4, pp. 422-445.

Sirmon, D.G. and Hitt, M.A. (2003), "Managing resources: linking unique resources, management, and wealth creation in family firms", *Entrepreneurship Theory and Practice*, Vol. 27 No. 4, pp. 339-358.

Stadler, C., Helfat, C.E. and Verona, G. (2013), "The impact of dynamic capabilities on resource access and development", *Organization Science*, Vol. 24 No. 6, pp. 1782-1804.

Sternquist, B., Huang, Y. and Chen, Z. (2010), "Predicting market orientation: Chinese retailers in a transitional economy", *International Journal of Retail & Distribution Management*, Vol. 38 No. 5, pp. 360-378.

Sweeney, J.C. and Soutar, G.N. (2001), "Consumer perceived value: the development of a multiple item scale", *Journal of Retailing*, Vol. 77 No. 2, pp. 203-220.

Taipei Times (2005), *CNN Changed News - for Better and Worse*, Taipei Times, available at: www.taipeitimes.com/News/editorials/archives/2005/05/31/2003257358 (accessed 9 October 2017).

Teece, D.J. (2007), "Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance", *Strategic Management Journal*, Vol. 28 No. 13, pp. 1319-1350.

Teece, D.J. (2014), "The foundations of enterprise performance: dynamic and ordinary capabilities in an (economic) theory of firms", *The Academy of Management Perspectives*, Vol. 28 No. 4, pp. 328-352.

Teece, D.J. and Pisano, G. (1994), "The dynamic capabilities of firms: an introduction", *Industrial and Corporate Change*, Vol. 3 No. 3, pp. 537-556.

Teece, D.J., Pisano, G. and Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18 No. 7, pp. 509-533.

Tsai, K.-H., Chou, C. and Kuo, J.-H. (2008), "The curvilinear relationships between responsive and proactive market orientations and new product performance: a contingent link", *Industrial Marketing Management*, Vol. 37 No. 8, pp. 884-894.

Van Vuuren, J. and Wörgötter, N. (2013), "Market driving behaviour in organisations: antecedents and outcomes", *South African Journal of Economic and Management Sciences*, Vol. 16 No. 2, pp. 115-141.

Vorhies, D.W. (1998), "An investigation of the factors leading to the development of marketing capabilities and organizational effectiveness", *Journal of Strategic Marketing*, Vol. 6 No. 1, pp. 3-23.

Vorhies, D.W. and Morgan, N.A. (2005), "Benchmarking marketing capabilities for sustainable competitive advantage", *Journal of Marketing*, Vol. 69 No. 1, pp. 80-94.

Wang, Y., Lo, H.-P. and Yang, Y. (2004), "The constituents of core competencies and firm performance: evidence from high-technology firms in China", *Journal of Engineering and Technology Management*, Vol. 21 No. 4, pp. 249-280.

Weston, J.F. (2002), "The exxon-mobil merger: an archetype", *Journal of Applied Finance*, Vol. 12, pp. 69-88.

Wiklund, J. and Shepherd, D. (2005), "Entrepreneurial orientation and small business performance: a configurational approach", *Journal of Business Venturing*, Vol. 20 No. 1, pp. 71-91.

Wilden, R. and Gudergan, S.P. (2015), "The impact of dynamic capabilities on operational marketing and technological capabilities: investigating the role of environmental turbulence", *Journal of the Academy of Marketing Science*, Vol. 43 No. 2, pp. 181-199.

Wilden, R., Devinney, T.M. and Dowling, G.R. (2016), "The architecture of dynamic capability research identifying the building blocks of a configurational approach", *The Academy of Management Annals*, Vol. 10 No. 1, pp. 997-1076.

Wilhelm, H., Schlömer, M. and Maurer, I. (2015), "How dynamic capabilities affect the effectiveness and efficiency of operating routines under high and low levels of environmental dynamism", *British Journal of Management*, Vol. 26 No. 2, pp. 327-345.

Wilson, R.M. and Gilligan, C. (2005), *Strategic Marketing Management: Planning, Implementation and Control*, Elsevier Butterworth-Heinemann, MA.

Winter, S.G. (2003), "Understanding dynamic capabilities", *Strategic Management Journal*, Vol. 24 No. 10, pp. 991-995.

Zahra, S.A. and George, G. (2002), "Absorptive capacity: a review, reconceptualization, and extension", *The Academy of Management Review*, Vol. 27 No. 2, pp. 185-203.

Zahra, S.A., Sapienza, H.J. and Davidsson, P. (2006), "Entrepreneurship and dynamic capabilities: a review, model and research agenda*", *Journal of Management Studies*, Vol. 43 No. 4, pp. 917-955.

Zeithaml, V.A., Bolton, R.N., Deighton, J., Keiningham, T.L., Lemon, K.N. and Petersen, J.A. (2006), "Forward-looking focus: can firms have adaptive foresight?", *Journal of Service Research*, Vol. 9 No. 2, pp. 168-183.

Zhang, J., Wedel, M. and Pieters, R. (2009), "Sales effects of attention to feature advertisements: a bayesian mediation analysis", *Journal of Marketing Research*, Vol. 46 No. 5, pp. 669-681.

Zollo, M. and Winter, S.G. (2002), "Deliberate learning and the evolution of dynamic capabilities", *Organization Science*, Vol. 13 No. 3, pp. 339-351.

Zou, S., Fang, E. and Zhao, S. (2003), "The effect of export marketing capabilities on export performance: an investigation of chinese exporters", *Journal of International Marketing*, Vol. 11 No. 4, pp. 32-55.

Appendix 1

Table AI.
Monte Carlo analysis of indirect effects

	Variables			Estimates		Asymptotic variances and covariance			Confidence intervals					
Hypothesis	*IV*	*M*	*DV*	*a*	*b*	*var (a)*	*var (b)*	*cov (a, b)*	Lower 0.5%	Lower 2.5%	Lower 5%	Estimate	Upper 5%	Upper 2.5%	Upper 0.5%
H3a	PMO	OPM	CV	0.248	0.433	0.002	0.006	−0.001	0.053	0.064	0.071	0.107	0.147	0.154	0.172
H3b	PMO	OPM	P	0.248	0.759	0.002	0.014	−0.001	0.094	0.112	0.123	0.188	0.258	0.272	0.303
H3c	PMO	OPM	ME	0.248	0.685	0.002	0.012	−0.001	0.085	0.103	0.112	0.170	0.233	0.245	0.271
H4a	VI	OPM	CV	0.541	0.433	0.004	0.006	−0.001	0.123	0.148	0.162	0.234	0.310	0.326	0.359
H4b	VI	OPM	P	0.541	0.759	0.004	0.014	−0.002	0.242	0.280	0.298	0.411	0.526	0.554	0.599
H4c	VI	OPM	ME	0.541	0.685	0.004	0.012	−0.002	0.217	0.252	0.270	0.371	0.475	0.501	0.546
H7a	PMO	ITM	CV	0.307	0.184	0.002	0.004	0.000	0.006	0.018	0.023	0.056	0.093	0.102	0.118
H7b	PMO	ITM	P	0.307	0.206	0.002	0.010	0.000	−0.017	0.003	0.013	0.063	0.118	0.131	0.156
H7c	PMO	ITM	ME	0.307	0.249	0.002	0.009	0.000	0.002	0.019	0.027	0.076	0.131	0.143	0.167
H8a	VI	ITM	CV	0.553	0.184	0.004	0.004	0.000	0.010	0.030	0.043	0.102	0.164	0.179	0.204
H8b	VI	ITM	P	0.553	0.206	0.004	0.010	0.000	−0.029	0.006	0.023	0.114	0.211	0.229	0.273
H8c	VI	ITM	ME	0.553	0.249	0.004	0.009	−0.001	0.006	0.035	0.052	0.138	0.225	0.243	0.279

Notes: *IV*: independent variable; *M*: mediator; *DV*: dependent variable; *a*: unstandardized regression coefficient for the association between *IV* and *M*; *b*: unstandardized coefficient for the association between the *M* and the *DV* (when the *IV* is also a predictor of the *DV*); *var (a)*: asymptotic sampling variance of *a*; *var (b)*: asymptotic sampling variance of *b*; *cov (a, b)*: asymptotic sampling covariance of *a* and *b*; PMO: proactive market orientation; VI: value innovation; OPM: operational marketing capabilities; ITM: induced market turbulence; CV: customer value; P: profitability; ME: market effectiveness

Appendix 2

Table AII. Reliability analysis results of items

Dimension	Items	α	EFA factor loading	β
Proactive MO				
KMO = 0.815; Bartlett = 597.720; df = 6; significance = 0.000				
Proactive MO	Our organization informs customers about new products before they are on the market*	0.89	–	–
	Our organization seeks to discover unexpressed customer needs		0.881	0.791
	Our organization develops solutions to address unstated customer needs		0.883	0.787
	Our organization seeks to deeply understand how customers use our products*		–	–
	Our organization innovates even at the risk of making our own products obsolete*		–	–
	Our organization engages with customers to find their latent needs		0.894	0.879
	Our organization works closely with lead users to understand emerging needs ahead of competitors		0.813	0.784
	Our organization monitors trends to understand what users will need in the future*		–	–
Value innovation				
KMO = 0.828; Bartlett = 756.701; df = 6; significance = 0.000				
Value innovation	Our organization collaboratively creates value with suppliers in innovative ways	0.88	0.826	0.769
	Our organization collaboratively creates value with distributors in innovative ways*		–	–
	Our organization delivers superior value to customers by altering traditional roles and relationships in our industry		0.916	0.896
	Our organization seeks innovative ways to improve our business model to optimize value creation		0.918	0.887
	Our organization experiments with innovative market approaches*		–	–
	Our organization seeks innovative ways to co-create added value with customers		0.887	0.841
Operational marketing capabilities				
KMO = 0.928; Bartlett = 4778.611; df = 136; significance = 0.000				
Pricing	Our organization uses pricing to respond quickly to market changes	0.92	0.797	0.806
	Our organization has the knowledge of competitors' pricing tactics		0.841	0.855
	Our organization prices products more effectively than competitors		0.736	0.809
	Our organization rigorously monitors competitors' prices		0.830	0.877

(*continued*)

Dimension	Items	α	EFA factor loading	β
Channel management	Our organization has strong relationships with distributors	0.96	0.841	0.882
	Our organization forms long-term contractual relationships with distributors		0.863	0.853
	Our organization attracts and retains the best distributors		0.856	0.928
	Our organization seeks to add value to our distributors' businesses more than competitors		0.844	0.940
	Our organization provides high levels of support to channel members		0.824	0.921
Marketing research	Our organization gathers information about customers	0.90	0.771	0.783
	Our organization gathers information about competitors*		–	–
	Our organization uses market research to develop effective marketing programs		0.795	0.865
	Our organization tracks evolving customer wants		0.745	0.862
	Our organization utilizes marketing research information more effectively than competitors		0.765	0.885
Marketing implementation	Our organization allocates its marketing resources effectively	0.94	0.846	0.914
	Our organization delivers marketing programs effectively		0.865	0.955
	Our organization translates marketing strategies into effective marketplace actions		0.834	0.932
	Our organization executes marketing strategies more efficiently than competitors*		–	–
	Our organization rigorously monitors marketing performance		0.681	0.850
Induced market turbulence				
KMO = 0.906; Bartlett = 3669.691; df = 105; significance = 0.000				
Change of market structure	Our organization seeks to influence industry structure through aggressive acquisitions	0.94	0.720	0.615
	Our organization seeks to influence market evolution through forming strategic alliances		0.787	0.842
	Our organization is innovative in designing new forms of distribution		0.714	0.925
	Our organization influences the distribution channels by forming strategic alliances		0.797	0.883
	Our organization influences market structure through incorporating complementary technologies		0.701	0.843
Change of market behavior	Our organization regularly develops innovative new products which make customers reconsider their preferences	0.90	0.828	0.890
	Our organization develops products which activate the unstated needs of customers		0.868	0.931

(*continued*)

Table AII.

Dimension	Items	α	EFA factor loading	β
	Our organization regularly adopts ideas from other industries to delight customers		0.794	0.838
	Our organization sets new product standards in our market		0.871	0.826
	Our organization is a product leader, which is often copied by competitors		0.835	0.749
Lobbying	Our organization makes political alliances to benefit the industry	0.93	0.841	0.705
	Our organization seeks to influence foreign trade regulations		0.773	0.873
	Our organization seeks to influence taxation policies for the benefit of our industry		0.806	0.954
	Our organization seeks to influence employment legislation for the benefit of our industry		0.859	0.864
	Our organization seeks to influence the levels of government support to the industry		0.873	0.662
Organizational outcomes				
KMO = 0.935; Bartlett = 3125.834; df = 66; significance = 0.000				
Customer value	Providing high-quality products*	0.91	–	–
	Delivering reliable products		0.725	0.739
	Presenting products at a reasonable price		0.828	0.741
	Delivering value to customers		0.824	0.920
	Providing superior value for money		0.830	0.895
Profitability	Business unit profitability	0.84	0.787	0.936
	Return on investment		0.813	0.934
	Return on sales		0.788	0.919
	Achieving financial objectives		0.648	0.899
Market effectiveness	Market share growth relative to competitors	0.91	0.841	0.872
	Growth in sales revenue		0.875	0.907
	Acquiring new customers		0.855	0.864
	Increasing sales to existing customers		0.759	0.801
Marker variable				
KMO = 0.765; Bartlett = 706.68; df = 3; significance = 0.000				
Work-family conflict	On the job, I have so much work to do that it takes away from my personal interests	0.92	0.932	0.873
	My job interferes with my responsibilities at home, such as yard work, cooking, cleaning, and repairs		0.954	0.941
	My job keeps me from spending the amount of time I would like to spend with my family		0.946	0.921

Table AII.

Notes: α = Cronbach's alpha; β = standardized regression weight; * = excluded in factor analysis

Corresponding author
Reza Kachouie can be contacted at: reza.kachouie@monash.edu