

Sustaining Superior International Performance: Strategic Orientations and Dynamic Capability of Environmentally Concerned SMEs

Nadia Zahoor

(First author, E-mail: nadia.zahoor@strath.ac.uk)

Lecturer and Chancellor's Fellow

Hunter Centre for Entrepreneurship, University of Strathclyde
199 Cathedral Street, Glasgow, G4 0QU, United Kingdom

Yong Kyu Lew

(Corresponding author, E-mail: yklew@hufs.ac.kr)

Professor of International Business

HUFS Business School, Hankuk University of Foreign Studies
Seoul, 02450, South Korea

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ABSTRACT

This study examines the influence of strategic orientations and dynamic capability on the sustainable international performance of small and medium-sized enterprises (SMEs). Building on the dynamic capability perspective, we propose that the interaction between entrepreneurial orientation (EO) and alliance orientation (AO) facilitates dynamic capability and, in turn, the sustainable international performance of SMEs. Using survey data from 211 environmentally concerned SMEs in the United Arab Emirates, the study finds the significant effects of the interaction between EO and AO on dynamic capability. Further, the results support that dynamic capability mediates the interactive effect of EO and AO on international performance. The study shows that the SMEs benefit from balancing as well as pursuing two complementary strategic orientations (*i.e.* EO and AO) towards developing dynamic capability that contributes to making superior international performance.

Keywords: Entrepreneurial orientation, alliance orientation, dynamic capability, international performance, sustainability, environmentally concerned SMEs.

1 Introduction

In this era of globalization, firms find themselves competing internationally for survival and success (Boso et al., 2012). Environmentally concerning small and medium-sized enterprises (SMEs) have even become more important actors in the international trading and investment sphere (Child et al., 2017). The changes in the global value chain and advancement in technology and communication have softened trade barriers, thereby resulting in a growing number of SMEs operating internationally (Covin & Miller, 2014; Khan & Lew, 2018). Consequently, scholars have started to understand key determinants of sustaining superior international performance (Bagheri et al., 2019; Stoian et al., 2018), especially taking into account the business characteristics of SMEs (Martineau & Pastoriza, 2016). Focusing on the determinants of international performance, scholars have studied a number of factors, primarily building on different perspectives such as strategic, competitive, organizational, and managerial (Bai et al., 2020; Coviello, 2015; Cuypers et al., 2020). Among these factors, this research focuses on strategic and competitive perspectives on environmentally concerned SMEs' international performance.

The literature on strategic orientation attempts to explain international performance as a form of entrepreneurial and strategic behaviors needed to deal with the challenges of the competitive landscape (Didonet et al., 2019; Liu et al., 2011). Particularly, entrepreneurial orientation (EO) is regarded as one of the most important strategic orientations (Amankwah-Amoah et al., 2019; Semrau et al., 2016; Zhang et al., 2012). EO refers to the “*methods, dispositions, practices, and decision-making styles managers use to act entrepreneurially*” (Lumpkin & Dess, 1996, p.136). It is a sustainable firm-level attribute that is represented in proactive, risk-taking, and innovative behaviors (Alayo et al., 2019). In the SME context, exploring international business (IB) activities would be entrepreneurial as such activities require a firm's capabilities to innovate and to take risks in the journey of internationalization, which are necessary characteristics to achieve international performance (Cavusgil & Knight, 2015; Li et al., 2021). As such SMEs possessing EO can have higher international performance because they possess legitimacy in the foreign markets by the actions to proactively adapt technologies so that products align with the foreign customers (Brouthers et al., 2015; Solano Acosta et al., 2018).

Furthermore, recent research reveals alliance orientation (AO) as an important determinant of international performance (Robson et al., 2019). AO refers to a firm's efforts to

scan its environment for partnering opportunities, coordinate its alliance strategies, and learn from its alliance experiences (Kandemir et al., 2006). It comprises a portfolio of skills namely alliance scanning, coordination, and learning that promote the competitiveness of firms (Bouncken & Fredrich, 2016). AO allows the firms to establish and manage relations with partners that are critical to achieve competitive advantage in international markets, especially in the case of SMEs due to their resource restrictions (Karami & Tang, 2019). Scholars have observed that AO contributes to SMEs' competitiveness by helping them to identify the best alliance partners, nurture joint alliance tasks, and promote learning from alliance partners (Bicen et al., 2021; Kohtamäki et al., 2018). As such, AO can be conducive to international performance due to its ability to identify new market opportunities and to build new knowledge with alliance partners (Solano Acosta et al., 2018).

The strategic orientations literature suggests that borderless mindset (*e.g.* EO) and abundant international networks (*e.g.* AO) provide the foundations on which a firm can build its interactions with foreign markets and achieve international financial and market performance (Karami & Tang, 2019; Sakhdari et al., 2020; Solano Acosta et al., 2018). However, previous studies on 'SMEs' internationalization have tended to overlook complementarity between them (Solano Acosta et al., 2018). In other words, these two orientations are complementary in the SME context: EO is crucial to SMEs' long-term opportunity recognition and development (Goel & Jones, 2016), and AO is crucial for resource attainment and to compete in the short term (Robson et al., 2019). It has been endorsed that a complementary and multiple strategic orientation approach is important to align environmental context and organizational characteristics that can maximize international performance (Boso et al., 2013; İpek & Bıçakcıoğlu-Peynirci, 2019). Accordingly, this study examines whether and how complementarity between EO and AO influences international performance.

We posit that EO and AO as complementary strategic orientations can derive the international performance of SMEs. Even though the direct effect between strategic orientations and international performance serves as a baseline model, scholars have questioned the theoretical adequacy of this perspective (Boso et al., 2018; Pascucci et al., 2016). Researchers suggest considering dynamic capability as a mediating mechanism between strategic orientations and international performance (Kohtamäki et al., 2018; Pehrsson, 2016; Solano Acosta et al., 2018). Dynamic capability is defined as the firm's ability to "*integrate, build, and reconfigure internal and external competencies to address rapidly changing environments*" (Teece et al., 1997, p. 516). It manifests "*the ability to sense and then seize*

opportunities quickly and proficiently” (Teece, 2000, p. 35), thus recognizing sensing and seizing as “*fundamental*” dimensions of dynamic capability (Teece, 2007, p. 1343). While sensing allows to search and identify new markets and technology opportunities, seizing is related to retaining these identified opportunities as they appear. As such, sensing and seizing capabilities, key dynamic capabilities, are important for a firm to sense and seize international market opportunities (Khan & Lew, 2018; Mudalige et al., 2019). Specifically, we argue that complementary between EO and AO allows SMEs to proactively identify partnering and other market opportunities as well as promote learning from partners, thereby enhancing dynamic capability (Jiang et al., 2020; Lin et al., 2020). Furthermore, having dynamic capability enables internationalizing SMEs to cope with dynamic business environments surrounding them and overcome liabilities of foreignness and smallness, thus promoting international performance (Khan & Lew, 2018; Martin et al., 2017).

Based on the aforementioned discussion, this study attempts to address the following research questions: (1) *What are the roles of complementary strategic orientations and dynamic capability in sustaining superior international performance*, and (2) *to what extent they influence such performance?* In answering these questions, we collected data from 211 environmentally concerned SMEs in the United Arab Emirates (UAE).

The main contributions of this study are twofold. First, the literature suggests that possession of a single strategic orientation (*i.e.*, either EO or AO) is inadequate (Schweiger et al., 2019) and that either orientation *per se* offers only a potential value (Amaya Rivas et al., 2020). Accordingly, this research goes beyond studying the main effects of each individual orientation; instead, we investigate the relatively under-researched performance implications of complementarity between EO and AO. In doing this, our research connects previously separate the two research streams (Ho et al., 2016; Kohtamäki et al., 2018) and extends them to the IB domain (Dabić et al., 2019) by assessing the relevance of strategic orientations complementary to transform externally acquired knowledge into internal routines and processes. Next, our study fills a knowledge gap on how environmentally concerned SMEs achieve international performance from the dynamic capability perspective, responding to the call from Cavusgil and Knight (2015). As such, we introduce the notion of dynamic capability as a mediator in explicating the complementary strategic orientations that may drive the international performance of SMEs (Helfat & Peteraf, 2015). By doing this, our findings help develop new and more comprehensive theoretical approaches to capture the underlying nature of international performance (Aaltonen, 2020; Solano Acosta et al., 2018).

2 Theory and hypothesis development

2.1 Dynamic capability

Since international performance accounts for the survival of many SMEs (Lee et al., 2012; Meschi et al., 2017), the prediction of international performance becomes a major research agenda in international entrepreneurship research (Aaltonen, 2020; Dabić et al., 2019; Gerschewski et al., 2018; Terjesen et al., 2013). In their efforts to determine international performance, international entrepreneurship scholars have drawn on multiple theoretical perspectives including resource-based view (RBV) (İpek, 2018; Prange & Pinho, 2017), network perspective (Galkina & Chetty, 2015), and transaction-cost perspective (Brouthers & Nakos, 2004; Hennart, 2014). However, undeniably, the current that is gaining prominence, not only in the context of SMEs, is the dynamic capability perspective (Teece, 2007; Teece et al., 1997). Extant IB research suggests that SMEs, which aspire to compete against their larger counterparts in the foreign marketplace, should build, integrate, and reconfigure resources and competencies through a continual process of knowledge acquisition and learning (Khan & Lew, 2018; Oura et al., 2016). In accordance with these authors and in line with Teece et al. (1997), the dynamic capability perspective allows us to capture the nature of SMEs and their expansion into dynamic international markets due to the deployment of dynamic capability.

The central tenet of the dynamic capability perspective is that a firm's competitive advantage is a function of a firm's ability to reconfigure rare, inimitable, valuable, and non-substitutable, known as VIRN resources, and capabilities (Lado et al., 1992). According to the dynamic capability perspective, a firm is viewed as a bundle of unique resources and capabilities that are not freely available in the market (Wernerfelt, 1995), and for that reason, a firm can sustain competitive advantage only if its resources can be mobilized to create unique capabilities and organizational routines (Hart, 1995; Teece, 2012). Particularly, the dynamic capability perspective suggests that resources alone are not sufficient to create value for a firm (see Barreto, 2010 for a review); their latent value can only be realized through a firm's idiosyncratic dynamic capability (e.g. Newbert, 2007; Teece, 2007).

While resources are “*organizational attributes that an organization can acquire, develop, nurture, and leverage for both internal (organizational) and external (marketplace) purposes*” (Srivastava et al., 2001, p. 779), capabilities are the ability to attain value from a firm's resources (Teece, 2007). In this regard, dynamic capability is a subset of the firm's resources whose purpose is to improve the productivity of the other resources (Kozlenkova et

al., 2014). Zahra et al. (2006) commentary concludes that dynamic capability is embedded skill and ability that is developed and exercised through various processes. Thus, dynamic capability can permit SMEs to utilize the specific resources of the firm to satisfy the needs and opportunities of the IB environment (Teece, 2012). Stating differently, dynamic capability, when combined with the firm's resources portfolio (Newbert, 2007; Teece, 2007), will permit SMEs to achieve superior performance due to identification of an opportunity and mobilization of resources to realize an opportunity in international markets.

2.2 Strategic orientations: entrepreneurial and alliance perspectives

Consistent with the dynamic capability perspective, we recognize EO and AO as important opportunity discovery resources. EO consists of activities that can help a small firm to anticipate and act on the external environmental changes and to undertake investments with uncertain outcomes (Covin & Slevin, 1991). The notion of EO is reflected in the tendency of a firm's to pursue activities including innovation (ability to introduce new products/services and modify existing ones), risk-taking (propensity of a firm to commit resources to activities with unknown outcomes), and proactiveness (introducing products and services ahead of competitors) (Lumpkin & Dess, 1996; Miller, 1983). As such, EO becomes a conduit for the sustained competitive advantage of an SME in particular because innovative behavior allows it to introduce new products/services and develop new capabilities ahead of competitors (Dias et al., 2021; Solano Acosta et al., 2018). Furthermore, proactive and risk-taking behaviors enable an SME to pursue promising opportunities and enjoy first-mover advantage in markets (Silva et al., 2021; Thanos et al., 2016). Thus, the firm must invest considerable time to cultivate it (Ljungkvist & Andersén, 2021).

AO explains the behavior of a firm to scan its environment for partnering opportunities, coordinate its alliance strategies, and learn from its prior and ongoing partners (Kandemir et al., 2006). Based on this conceptualization, AO is perceived as a composition of three skills including alliance scanning (the degree to which an SME search for partnering opportunities), alliance coordination (the extent to which an SME coordinates with partners and exchanges resources), and alliance learning (the degree which an SME obtains and utilizes the knowledge and skills) (Amaya Rivas et al., 2020). Since alliance-oriented firms proactively monitor their marketplace and seek information from about and prospective partners (Bouncken & Fredrich, 2016; Lew et al., 2013), it allows SMEs to have more reliable and timely information than their competitors (Donbesuur et al., 2021). Yet, the pursuit of EO leads to risky managerial decisions

(Karami et al., 2020; Lin et al., 2020), AO provides a bundle of unique resources that permit an SME to explore market opportunities and to reposition itself, maintaining its competitive advantage (Sakhdari et al., 2020). This suggests that SMEs can benefit by aligning EO with AO.

More importantly, we further argue that complementary resources (*i.e.*, EO and AO) provide a necessary but insufficient condition for international performance. The dynamic capability perspective suggests that idiosyncratic dynamic capability is vital for a firm's success in changing environmental conditions (Teece, 2007; Zollo & Winter, 2002). In this vein, it is a dynamic capability that transforms the benefits of complementary resources into performance (Lee et al., 2021; Lew et al., 2013). More specifically, the dynamic capability allows the “*discovery and development of opportunities and the effective combination of internally generated and externally generated invention*” (Teece, 2007, p. 1320). Therefore, the dynamic capability is crucial for linking a firm's resources to its outcomes in volatile and competitive IB environments. As such, the complementary EO and AO resources may prompt an SME to develop the dynamic capability to explore and exploit market opportunities. These capabilities, in turn, lay a foundation from which an SME can achieve international performance through enabling essential knowledge integration and value creation mechanism to convert benefits of complementary resources into international performance (Buccieri et al., 2020; Pinho & Prange, 2016).

Furthermore, firms differ in their ability to effectively integrate, build, and reconfigure resources to achieve competitive advantage (Suddaby et al., 2020; Weaven et al., 2021). Only firms that develop suitable dynamic capability can effectively capture resource benefits and recap success in international markets. Therefore, a firm must have the distinctive dynamic capability to convert the benefits of complementary resources into international performance. Teece (2007, 1343) recognizes sensing and seizing as being “*fundamental*” dynamic capabilities, and describes dynamic capabilities as “*the ability to sense and then seize opportunities quickly and proficiently*” (Teece, 2000, p. 35). This study thus considers sensing and seizing as two important and strong forms of dynamic capabilities (Ince & Hahn, 2020; Zhang & Wu, 2017). While the sensing capability refers to a firm's ability to actively search and explore new technologies and markets (Teece, 2007), the seizing capability reflects the ability of a firm to retain and capture the value of an opportunity by mobilizing resources (Teece, 2012).

2.3 Hypothesis development

2.3.1 Complementarity between EO and AO and dynamic capability

The entrepreneurship and strategic alliance literature suggest that EO may benefit from interactions with AO, and by extension enhance dynamic capability for competitive advantage (Karami & Tang, 2019; Teece, 2014). Dynamic capability is most likely to be associated with EO when SMEs utilize AO that enables them to pursue opportunities and advantages (Ferreira et al., 2020; Wang & Gao, 2021). This is because EO involves value-creation activities with high levels of uncertainty and risks (Karami et al., 2020), while AO allows to mitigate such risk and overcome resource constraints due to value-appropriation activities (Amaya Rivas et al., 2020). Thus, alliance activities that provide SMEs with resources residing outside the organizational boundaries are likely to be critical in facilitating EO interactions. Further, AO can be designed to promote the acquisition, transfer, and implementation of complementary knowledge that shapes organizational learning embedded within EO (Jiang et al., 2016; Wales et al., 2013), and where this occurs, *'will improve the efficiency with which partners' inputs are utilized and consequently support domestic firms to build strong dynamic capabilities'* (Xu et al., 2018, p. 144). Recent empirical research finds that the relationship between EO and dynamic capability is stronger in those firms which have implemented AO to a greater extent (e.g., Cui et al., 2018).

Further, the synergy perspective of the resource-based view (RBV) on the firm suggests exploring the interactive effect between resources (Barney et al., 2001). In this vein, the alignment between EO and AO constitutes an *ex-ante* resource base for the capability development of entrepreneurial SMEs in their internationalization process. Particularly, such strategic orientations provide the spur the development and stimulation of these firms' dynamic capability (Teece et al., 1997). EO influences a small firm to pursue new market opportunities and the renewal of existing areas of operation (Hult & Ketchen, 2001, p. 901). Based on this view, an SME with high levels of EO is more likely to benefit from AO in a supplementary way by creating an adhocracy to pool and deploy unique resources from which a firm can sense and seize new market opportunities in a changing environment (Donbesuur et al., 2021; Ferreira et al., 2020). Additionally, high levels of EO combined with AO in a supplementary way can benefit an SME, whereby proactive search of partners and learning from partners are applied in such a way that new and existing knowledge is expanded towards sensing and seizing new entrepreneurial and market opportunities (Adomako et al., 2018; Rodrigo-Alarcón et al., 2018).

Moreover, EO, as a resource, will not automatically lead to dynamic capability (Boso et al., 2018). This suggests that relatively knowledge- and network-scarce SMEs, compared to large multinational corporations, need to combine 'external' knowledge through forming strategic partnerships with their 'internal' entrepreneurial beliefs. They do this through the use of AO which has been specifically designed to mobilize the firm's entrepreneurial values by building trust among partners and mitigate the risk of learning races (Amaya Rivas et al., 2020; Kauppila, 2015). Stating differently, AO is the mechanism that helps firms to match their partners' abilities, thereby enabling dynamic capability (Jiang et al., 2020; Li et al., 2017). For example, by having an inter-organizational knowledge sharing process, entrepreneurial SMEs may be able to recombine their knowledge, residing within their firm boundaries, with their partner's one or create specialized knowledge (Amaya Rivas et al., 2020). Following this logic, SMEs with high levels of AO are more likely to design partnering routines that enable information sharing, making them more flexible in their decision-making processes (Bicen et al., 2021; Sakhdari et al., 2020). By continuously obtaining information and knowledge through the alliances, an SME's resource flexibility is improved and as well as risk-taking abilities (Leischnig & Geigenmüller, 2020), resulting in higher levels of sensing and seizing capabilities. Based on this, AO allows an SME to exchange knowledge with partners, resulting in a better understanding of the entrepreneurial style and improving future market and product opportunities (Mu et al., 2017). Thus, we expect that an SME's EO and AO are complementary, thus having a synergetic effect on its dynamic capability of sensing and seizing (see Figure 1).

H1: The interaction of EO and AO is positively associated with the dynamic capability of an SME.

2.3.2 The mediating role of dynamic capability

Prior research suggests dynamic capability may be one of the mediating factors that link both EO (Cui et al., 2018) and AO (Hong et al., 2018) to performance. Moreover, although researchers have examined the mediating effect of SMEs' dynamic capability on the relationship between international performance and a number of determinants such as managerial ties (Tasheva & Nielsen, 2020), social-network relationships (Pinho & Prange, 2016), and knowledge management practices (Falahat et al., 2020), research lacks the investigation of how EO and AO interactions contribute to international performance through dynamic capability. Thus, a mediating effect of dynamic capability on the relationship of the interaction between EO and AO with SMEs' international performance still remains incomplete.

The synergy perspective of RBV suggests that the locus of sustainable competitive advantage lies in a firm's propensity and ability to pursue opportunities by seeking complementary among individual resources (Barney et al., 2001). Consistent with this logic, the combination of EO and AO offers a supportive organizational characteristic to SMEs for developing distinctive dynamic capability (*i.e.*, sensing and seizing capabilities). Accordingly, an SME with strong dynamic capability is more likely to achieve international performance because strong sensing and seizing capabilities are associated with high attentiveness, active learning, and strong market responsiveness (Teece, 2014). Furthermore, sensing and seizing capabilities allow an SME to proactively develop market understanding, which in turn helps to identify customer needs, product requirements, and market opportunities. They also help a firm to devote the needed resources to capture emerging international opportunities.

In addition, the complementary between EO and AO provides a strong knowledge base from which SMEs can achieve potential benefits including effectiveness and efficiency of knowledge utilization and international success (Mu et al., 2017; Villar et al., 2014). However, in a dynamic environment, knowledge can quickly attenuate and become obsolete (McKelvie et al., 2017). Consequently, to transform the possible gains of complementary resources into international performance, a small firm needs the dynamic capability to sense and seize potential market opportunities before they are eroded (Lee et al., 2021). The inherent alertness and active learning in sensing and seizing capabilities allow an SME to become more alert to new market opportunities and identify the relevant new alternatives (Weaven et al., 2021; Zhang & Wu, 2017). This is likely to enhance the configuration between a firm's bundle of resources and new market opportunities, enabling the realization of the latent value of these resources (Fainshmidt et al., 2016; Nayak et al., 2019; Newbert, 2007). In other words, the strategic flexibility inherited in sensing and seizing capabilities establishes a connection between what the SME produces and what is happening in its environment (Kafouros & Aliyev, 2016; Wilden et al., 2016). The preceding arguments suggest that the dynamic capability acts as a fundamental underlying mechanism that an SME can utilize to transform the latent value of complementary resources into international performance.

H2: Dynamic capability mediates the relationship of the interaction between EO and AO with international performance of SMEs.

Insert Figure 1 about here

3 Methods

3.1 Research context

The context of this study is the emerging economy of the UAE, which is an appropriate choice for the following reasons. First, the UAE has transformed into a regional commercial center due to the country's efforts to reduce the excessive reliance on the oil industry and develop the non-oil sector of its economy. Therefore, it is important to study the internationalization process of firms located in this small emerging economy (Elbanna et al., 2020; Shayah, 2015). Second, the UAE is experiencing significant economic development within the region. Particularly, the economy of the UAE experienced a GDP growth rate of 4.23% from 2000 until 2019 (TradingEconomics, 2020). This has created significant internationalization behavior through many large initiatives and projects. Third, SMEs are the major contributor to economic growth and employment opportunities due to their potential to exploit new opportunities and new knowledge. Also, SMEs are known due to their affordability of the latest technology and for having international customers (GEM-UAE, 2018). Fourth, the UAE is committed to boost the local green economy as part of the international sustainable development agenda (Zahoor & Gerged, 2021). Under the Green Economy initiative by Sheikh Mohammed, the UAE seeks to become a global hub and successful model of a sustainable economy to enhance international competitiveness and sustainability and protect the environment for future generations (UAE, 2021). This initiative includes the programs and policies to facilitate the production, import, and export of green products and technologies. It is therefore vital to understand how EO and AO of UAE-based SMEs allow them to develop the dynamic capability to adhere to sustainable policies and achieve international performance.

3.2 Sampling and data collection

The sampling frame of this study consisted of SMEs listed on the Dubai Chamber of Commerce and Industry. The criteria for selecting the firms were as follows. First, they had to be independent, private-owned firms. Second, they had to be SMEs with 250 or fewer employees (Dubai-SME, 2014). Third, they had to be trading abroad for at least three years given the focus of this study on international performance. Fourth, they had to be focused on environmental issues to be characterized as environmentally concerned SMEs. These criteria are consistent with extant strategic orientations and SMEs studies (Amankwah-Amoah et al., 2019; Danso et al., 2019; Jansson et al., 2017). Accordingly, we identified 800 environmentally concerned SMEs that met our criteria. To request participation, the owners, senior managers, department

heads, and IB managers were contacted to ensure that the respondents were knowledgeable about their firm's international activities and strategic practices. Following Dillman (2011), a package containing the questionnaire along with a cover letter explaining the purpose of the research was distributed using the drop-off and pick-up technique. The drop-off and pick-up techniques are more appropriate since the email, telephone, and personal survey have encountered a lower-response rate (Jackson-Smith et al., 2016; Nakos et al., 2019). The questionnaire was designed and administered in the English language because it is the most common first or second language of the organizations in the UAE (Al Ariss & Guo, 2016; Nakos et al., 2019). We received 215 questionnaires from the respondents and finally accepted 211 valid ones (a response rate of 26 percent). The respondent firms vary in size from 2 to 250 full-time employees, with an average number of 97 employees. Of the 211 firms, 87 operate in the manufacturing industry (41%), 66 in the service industry (31%), and 58 in retail (28%). The average firm age was 20.54 years and the average managerial experience was 8.31 years.

3.3 Measures

This study used a seven-point Likert scale and the scale development and testing procedures (Churchill, 1979). Based on the literature review, a relevant pool of items was generated, which were subsequently reviewed by four academics in the strategy and IB field. Then, we dropped some of the items and tweaked the wording of a small number of them. Second, we pretested the questionnaire with ten senior managers in environmentally concerned SMEs located in Dubai. They were asked to complete the questionnaire and recommend any additional changes to existing questions. The respondents' comments were incorporated to ensure that the final questionnaire is in an understandable and logical format.

EO is defined as a strategic attitude and behavior that a firm utilizes to identify and exploit market opportunities (Genc et al., 2019). Following the approach of Covin and Slevin (1989), EO is conceived as a reflective, second-order construct, integrated by three dimensions: innovation, risk-taking, and proactiveness. To capture three components of EO, nine items were derived from Xu et al. (2018). Three of the items measured a company's behavior of innovation, three its risk-taking, and three its proactiveness.

AO refers to a firm's routines and proclivity towards international alliances (Bouncken & Fredrich, 2016). AO is a second-order construct consisting of alliance scanning, alliance coordination, and alliance learning. The construct was measured with nine items, where three items measured alliance scanning, three items measured alliance coordination, and three items

measured alliance learning. All of the construct items were adopted from Kandemir et al. (2006).

Dynamic capability is operationalized as the ‘*fundamental*’ abilities of a firm to sense and seize (Teece, 2007). Sensing capability refers to the ability of a firm to gather relevant market intelligence for market and product development (Day, 2004). In contrast, seizing capability concerns the ability of a firm to sustain and exploit new market and product development opportunities (Teece, 2010). Following the prior literature (Jantunen et al., 2018; Wilden et al., 2013), the dynamic capability is conceived as a second-order construct of sensing and seizing capabilities. In order to measure these constructs, seven items were used as proposed by Zhang and Wu (2017). Four of the items measured a firm’s sensing capability and three its seizing capability.

International performance refers to the success of business in international markets. Since objective performance data are frequently unavailable with SMEs (Bagheri et al., 2019), subjective performance measures (Singh et al., 2016). A four-item scale for international performance is taken from He and Wei (2011). The respondents were asked to evaluate their levels of agreement with statements concerning the achievement of the firm’s several objectives in the most important international market in the last three years.

The previous research indicates that control variables can have the potential to influence the international performance of SMEs (Martin et al., 2017; Tan & Sousa Carlos, 2015). Therefore, we tested for several control variables: firm size, firm age, industry type, international experience, managerial experience, and environmental uncertainty. We measured firm size by the total number of full-time employees, and a natural logarithm transformation was taken. Firm age was measured by a natural logarithm transformation of the total number of years a firm has been in operation. Industry type was considered as a dummy variable with 1 = manufacturing, 2 = services and 3 = retail. For international experience, we used the natural logarithm transformation of the year when the first sale was made in the international market. Finally, the environmental uncertainty was measured with multi-items that assessed managerial perceptions of the external environment conditions (Jaworski & Kohli, 1993).

3.4 Bias testing

The issue of non-response bias was assessed by testing the difference between the early and late respondents groups (Armstrong & Overton, 1977). The early response group was defined as the first 75% of returned questionnaires and the last 25% were considered as a late response

group. Early and late respondent groups were compared for firm age, firm size, and position of respondents. Results of the t-test did not highlight any significant differences between the two groups, suggesting that non-response bias is not an issue.

Given that a single instrument is used to collect the data in this study, we employed both *ex-ante* and *ex-post* procedures to assess potential common method bias (CMB). First, following guidelines by Podsakoff et al. (2003), *ex-ante* procedures included: (1) use of appropriate business terminology; (2) avoidance of double-barreled questions; (3) assurance of anonymity to respondents; (4) counterbalancing order of questions; and (5) use of multiple scales. Second, we used statistical tests to examine the CMB problem as *ex-post* procedure. Following previous practices (Boso et al., 2013), we used three competing models: (1) method-only model where all items were loaded on a single latent construct ($\chi^2 = 3455.430$; $DF = 495$; $P < 0.001$; $\chi^2/DF = 16.98$; $CFI = 0.34$; $NFI = 0.31$; $RMSEA = 0.17$); (2) trait-only model in which each item was loaded on its respective latent construct ($\chi^2 = 484.28$; $p > 0.05$; $\chi^2/DF (436) = 1.12$; $CFI = 0.98$; $NFI = 0.91$; $RMSEA = 0.02$); and (3) method and trait model in which a common construct linking all the items in model 2 ($\chi^2 = 506.408$; $DF = 433$; $P < 0.01$; $\chi^2/DF = 1.17$; $CFI = 0.98$; $NFI = 0.90$; $RMSEA = 0.03$). Based on a comparison of three models, model 1 yielded poor fit statistics but model 2 and model 3 provided acceptable model fit statistics, with model 3 being slightly superior. These findings show that CMB is not a serious concern for this study.

Insert Table 1 and Table 2 about here

4 Results

4.1 Measurement model

The confirmatory factor analysis (CFA) was used to evaluate the psychometric properties of the measures (Anderson & Gerbing, 1988). We conducted the CFA using the maximum likelihood estimation procedure in AMOS 26. First, to avoid the violation of minimum sample size to parameter ratio, we analyzed the scales in subsets by analyzing the conceptually related concepts together (e.g., Cadogan et al., 2006; Martin et al., 2017). Overall, four sub-sets were evaluated. The first set included the three components of EO: innovation, risk-taking, and proactiveness. The second set contained the three components of AO: alliance scanning, alliance coordination, and alliance learning. The third set contained the two fundamental components of dynamic capability: sensing and seizing. The final, fourth, set assessed a full

measurement model in which we entered all the constructs including control variables. As shown in Table 1, we obtained the fit indices that ranged from very good to excellent.

Second, we assessed the unidimensionality of the full measurement model using a number of approximate fit indices. The inspection of medication indices indicates an absence of correlated errors, thereby suggesting that there is no departure from unidimensionality. The results also suggested an excellent model fit (Hair et al., 2018): $\chi^2 = 484.28$; $p > 0.05$; $\chi^2/DF (436) = 1.12$; CFI = 0.98; IFI = 0.98; GFI = 0.89; RMSEA = 0.02; SRMR = 0.04.

Next, the convergent validity and reliability were assessed using factor loadings, average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha (CA). First, all the factor loadings were significant and above the threshold of 0.70 (Hair et al., 2018). Second, the AVE extracted exceeded the cutoff of 0.50 (Anderson & Gerbing, 1988), and the CR and CA for all the constructs were above the threshold of 0.70 (Bagozzi & Yi, 2012). Thus, the results demonstrate that the adequate convergent validity and reliability of latent constructs. The discriminant validity was examined by comparing the square root of AVE with the correlation (Fornell & Larcker, 1981). As shown in Table 2, the square root of each AVE coefficient is larger than the correlations between constructs, which implies the satisfactory discriminant validity of the constructs. The descriptive statistics suggest that the variables used in this study are fairly normally distributed (as shown in Table 3).

Insert Table 3 about here

4.2 Hypotheses testing

We tested our study hypotheses in two stages. First, the regression analysis was performed to test the effect of the interaction between EO and AO on dynamic capability and test the effect of dynamic capability on international performance. Second, consistent with prior studies (Chirico & Salvato, 2016; Døjbak Håkonsson et al., 2016; Tajeddin & Carney, 2019), we tested the mediation effect of dynamic capability on the relationship of interaction between EO and AO with firm performance using Baron & Kenny's (1986) causal steps approach and bootstrapping technique (Rungtusanatham et al., 2014).

To reduce the occurrence of multicollinearity, we mean-centered the measures of all explanatory and control (where multi-items scales were used) variables before testing the hypotheses. We also assessed the possibility of multicollinearity by calculating the variance inflation factor (VIF) for all regression models. The VIF values range between 2.11 and 2.16

and thus, are below the recommended threshold of 10 (Tabachnick & Fidell, 2012). Because the product-term analysis was performed to test the hypothesis, we created the multiplicative terms and used them in the regression analysis. Specifically, the multiplicative term was created for EO×AO to estimate *H1* and *H2*. There are two groups of regression models (see Table 4). The first group consists of Model 1 and 2 with dynamic capability as the dependent variable. The second group contains Model 3 to 6 with international performance as a dependent variable. Model 1 and 3 are baseline models with all the control variables: firm size, firm age, industry, managerial experience, international experience, and environmental uncertainty. Model 2 contains explanatory variables to test whether the interaction of EO and AO is associated with dynamic capability. The results show that the interactive term of EO and AO is significantly and positively related to dynamic capability ($\beta = 0.19$, $p < 0.01$) in Model 2 ($R^2 = 0.24$, Adjusted $R^2 = 0.21$, $F = 7.08$, $p < 0.001$), thereby supporting *H1*.

Insert Table 4 about here

H2 proposed that the interactive effect of EO and AO on international performance would be mediated by dynamic capability. To test for mediation, we first used Baron & Kenny's (1986) causal steps approach¹. The results in Model 4 ($R^2 = 0.20$, Adjusted $R^2 = 0.16$, $F = 5.57$, $p < 0.001$) show that the interaction term of EO x AO is significantly and positively associated with international performance ($\beta = 0.17$, $p < 0.01$). Similarly, the interaction term of EO x AO is significantly associated with dynamic capability ($\beta = 0.19$, $p < 0.01$) in Model 2 ($R^2 = 0.21$, Adjusted $R^2 = 0.21$, $F = 7.08$, $p < 0.001$). The results show that the dynamic capability positively relates to international performance ($\beta = 0.66$, $p < 0.001$) in Model 5 ($R^2 = 0.43$, Adjusted $R^2 = 0.41$, $F = 22.32$, $p < 0.001$). Finally, the Model 6 ($R^2 = 0.46$, Adjusted $R^2 = 0.44$, $F = 16.85$, $p < 0.001$) show that significant impact of the interaction between EO and AO on international performance vanishes ($p > 0.10$) when dynamic capability variable is included in the regression of international performance and it has a significant and positive effect on international performance ($\beta = 0.58$, $p < 0.001$). These results together suggest that the above conditions for mediation are satisfied and that this is a case of full mediation because the interaction between EO and AO becomes insignificant in Model 6.

¹ Following Baron and Kenny (1986), four conditions are required for mediation: (1) the significant effect of the interactive term of EO and AO on the international performance, (2) the significant relationship of the interactive term of EO and AO with the dynamic capabilities, (3) the significant effect of the dynamic capabilities on the international performance, and (4) the significant relationship between the dynamic capabilities and the international performance in such a way that the direct effect is non-significant or significantly smaller than the total effect when controlling for the interactive term of EO and AO.

Preacher and Hayes (2008) argue that the approach proposed by Baron and Kenny's (1986) approach does not fully quantify the mediation effect, but only concludes the existence of mediating by effect by logical inference from a set of hypotheses test. Accommodating this criticism (Hayes, 2009; Zhao et al., 2010), we rigorously conducted bootstrap and Sobel tests. In this context, we used the PROCESS macro for SPSS approach developed by Preacher and Hayes (2004). We calculated 95% bias-corrected confidence intervals with a bootstrap approach (5,000 resamples). The results in Table 5 of the bootstrap analysis showed that there was a significant indirect effect (0.16) because the lower limit of the 95% bias-corrected confidence interval for the bootstrapped effect was positive (0.04). It accordingly confirms that the interaction between EO and AO affects international performance through dynamic capability, thereby supporting *H2*.

Insert Table 4 and Table 5 about here

5 Discussion and conclusions

5.1 Theoretical implications

This study contributes to international entrepreneurship literature and the dynamic capability perspective in three ways. First, a large body of research has focused on the role of EO and AO in promoting performance (Boso et al., 2018; Karami & Tang, 2019; Wales et al., 2011). Although these resources have value for SMEs to achieve success, Boso et al. (2013) posit that their potential benefits should not be considered in isolation. Recent empirical studies have shown that the nature of the relationship between EO and performance (e.g., Cui et al., 2018), and between AO and performance is unclear (e.g., Amaya Rivas et al., 2020). Specifically, in the field of international entrepreneurship research, empirical findings remain equivocal regarding the impact of EO and AO on international performance (Robson et al., 2019; Solano Acosta et al., 2018). Indeed, empirical evidence for the joint impacts of the EO and AO on international performance is not well developed. We conceptually draw on dynamic capability and strategic orientation to test and provide support for the joint effects of EO and AO on international performance in the SME context (Leiblein, 2011; Schilke et al., 2018).

Second, previous research lacks insights on how resource configurations enhance dynamic capabilities such as sensing and seizing. (Laaksonen & Peltoniemi, 2018; Wilden et al., 2016). Although the seminal work of Teece et al. (1997) points to the importance of a firm's resource base, the empirical work has often vaguely considered the role of resources as the foundations for creating dynamic capability (Teece, 2014) with little emphasis on

complementary resources to fulfill this role. Our study results not only support the essential role of a firm's resource portfolio such as EO and AO in building dynamic capability (Teece, 2007), but also uncover the effect of resource interactions. These findings provide new insights into the integrated effect of EO and AO on the development of dynamic capability in SMEs. Specifically, our results suggest that the extent to which EO promotes sensing and seizing capabilities may depend on SMEs' AO. Likewise, SMEs directing AO towards sensing and seizing capabilities may be more successful by endorsing EO. Our research enriches the literature which calls for research on combining EO and AO (e.g., Solano Acosta et al., 2018) by signifying the alignment between EO and AO in generating SMEs' dynamic capability. Accordingly, our study demonstrates SMEs benefit from balancing as well as pursuing these two complementary strategic orientations towards developing dynamic capability.

Third, this study enhances the understanding of the relationship between SMEs' resources and performance (Newbert, 2007). In doing this, we provide preliminary support to Newbert's (2007) argument that the latent value of the resource portfolio is recognized through dynamic capability. Our study shows that dynamic capability is a mechanism through which resources can be integrated to generate superior international performance. Specifically, while a body of research has recognized the EO-international performance and AO-international performance (Dai et al., 2014; Karami & Tang, 2019), research has a black-box that calls for understanding the mechanisms underlying these relationships (e.g., Kohtamäki et al., 2018; Wales et al., 2011). The findings of this study contribute to the international entrepreneurship and alliance literature by showing that sensing and seizing capabilities provide a mechanism through which SMEs can capitalize on their resources interplay for international performance. As shown in Table 6 (see Model 6), the interplay between EO and AO does not guarantee superior SMEs' international performance otherwise they can realize advantages from such interactions between strategic orientations. The interaction between EO and AO allows SMEs to develop sensing and seizing capabilities to explore market opportunities, which in turn, can facilitate international performance. Thus, our study responds to call in the international entrepreneurship and alliance management literature (Kohtamäki et al., 2018; Terjesen et al., 2013) for research on the mechanisms through which EO/AO interplay are combined and transformed to performance benefits.

5.2 Practical implications

Our study has important implications for practitioners and policymakers. First, SMEs need to develop and maintain high levels of EO and AO to advance sensing and seizing capabilities. However, given the resource constraints of SMEs, either orientation provides only partial benefits to enhance the sensing and seizing capabilities. Our findings highlight that SMEs need to explore dual-orientation involving the simultaneous pursuit of EO and AO. EO helps a small firm to sense and explore new opportunities, while AO enables SMEs to accumulate external resources for seizing emerging market opportunities. By combining both orientations, SMEs can develop sensing capability of identifying new market opportunities and improve seizing capability to retain market opportunities and satisfy the needs of customers.

Second, our results indicate that sensing and seizing capabilities serve as an important mechanism through which SMEs can integrate the benefits of EO-AO interplay that enhances international performance. More importantly, our results suggest that without sensing and seizing capabilities, simply possessing EO and AO may not be sufficient for achieving international performance. Consequently, to enhance international performance, managers need to institute policies that enhance the development of sensing and seizing capabilities. Lastly, this study suggests that managers' awareness of environmental and sustainability issues is crucial to increase the survival and international competitiveness of SMEs in the environment. Therefore, SMEs must proactively engage in EO and AO activities simultaneously to develop the dynamic capability for sustainable international performance that can also characterize them as environmentally concerned SMEs.

5.3 Limitations and future research

The purpose of this study is to examine whether SMEs accrue international performance benefits by simultaneously aligning both EO and AO and dynamic capability, particularly in an emerging economy context. Drawing on the dynamic capability perspective, we examined the effects of a configuration of EO and MO on dynamic capability. Also, we have provided empirical validation for the mediating effect of dynamic capability on the relationship of the interaction of EO and AO with international performance. However, this study has limitations that future researchers may try to address.

First, we relied on cross-sectional data to test our study hypotheses which might place limitations to make causal predictions. In this regard, future studies can utilize longitudinal data to increase confidence in the results. Second, our study is undertaken in the UAE, a single

and relatively small emerging economy. Although this research context shares many characteristics with other emerging countries (e.g. infrastructure and exporting behavior), each economy may possess idiosyncratic elements that allow additional insights into strategic orientations and dynamic capability development. For example, there is a lack of evidence on how future orientation, family orientation, and cultural orientation may shape the relationship between strategic orientations, dynamic capability, and international performance in SMEs. Thus, future studies can consider the role of cultural orientations in developing and developed countries to incorporate additional variables at the country level. Third, while we provide useful insights into the effect of sensing and seizing as prominent dynamic capabilities, our study disregarded the role of reconfiguration capability to redeploy the assets and organizational structures as the organization grows or market and technology changes (Teece, 2007). Future studies could understand the role of reconfiguration as a dynamic capability to adjust the organizational structure for international markets. Fourth, the benefits conferred by dynamic capability are likely to differ due to differences in organizational transformative and alignment mechanisms and managerial cognition. Future studies therefore could explore the affective micro-foundations of SMEs' dynamic capability through an examination of the behavior of the founders of SMEs, internal organization structures, and corporate culture. Finally, there is the need to utilize the institution-based view with the dynamic capability perspective and examine how decision-making capabilities and quality enhance operational agility and corporate sustainability practices and how such practices impact SMEs' international performance and survival.

References

- Aaltonen, P. H. M. (2020). Piecing together a puzzle—A review and research agenda on internationalization and the promise of exaptation. *International Business Review*, 101664.
- Adomako, S., Danso, A., Boso, N., & Narteh, B. (2018). Entrepreneurial alertness and new venture performance: Facilitating roles of networking capability. *International Small Business Journal*, 36(5), 453-472.
- Al Ariss, A., & Guo, G. C. (2016). Job allocations as cultural sorting in a culturally diverse organizational context. *International Business Review*, 25(2), 579-588.
- Alayo, M., Maseda, A., Iturralde, T., & Arzubiaga, U. (2019). Internationalization and entrepreneurial orientation of family SMEs: The influence of the family character. *International Business Review*, 28(1), 48-59.
- Amankwah-Amoah, J., Danso, A., & Adomako, S. (2019). Entrepreneurial orientation, environmental sustainability and new venture performance: Does stakeholder integration matter? *Business Strategy and the Environment*, 28(1), 79-87.
- Amaya Rivas, A., Chen, Y.-C., & Yang, T.-K. (2020). Entrepreneurial and alliance orientation alignment in new product development. *Technological Forecasting and Social Change*, 153, 119916.

- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological bulletin*, 103(3), 411.
- Armstrong, J. S., & Overton, T. S. (1977). Estimating Nonresponse Bias in Mail Surveys. *Journal of Marketing Research*, 14(3), 396-402.
- Bagheri, M., Mitchelmore, S., Bamiatzi, V., & Nikolopoulos, K. (2019). Internationalization Orientation in SMEs: The Mediating Role of Technological Innovation. *Journal of International Management*, 25(1), 121-139.
- Bagozzi, R. P., & Yi, Y. (2012). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.
- Bai, W., Liu, R., & Zhou, L. (2020). Enhancing the learning advantages of newness: The role of internal social capital in the international performance of young entrepreneurial firms. *Journal of International Management*, 100733.
- Barney, J., Wright, M., & Ketchen Jr, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of management*, 27(6), 625-641.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51(6), 1173.
- Barreto, I. (2010). Dynamic capabilities: A review of past research and an agenda for the future. *Journal of management*, 36(1), 256-280.
- Bicen, P., Hunt, S. D., & Madhavaram, S. (2021). Coopetitive innovation alliance performance: Alliance competence, alliance’s market orientation, and relational governance. *Journal of Business Research*, 123, 23-31.
- Boso, N., Annan, J., Adeleye, I., Iheanachor, N., & Narteh, B. (2018). Examining the Paths from Export Strategic Orientations to Export Performance: The Mediating Role of Export Resource Transformation Capability. *Thunderbird International Business Review*, 60(2), 207-230.
- Boso, N., Cadogan, J. W., & Story, V. M. (2012). Complementary effect of entrepreneurial and market orientations on export new product success under differing levels of competitive intensity and financial capital. *International Business Review*, 21(4), 667-681.
- Boso, N., Story, V. M., & Cadogan, J. W. (2013). Entrepreneurial orientation, market orientation, network ties, and performance: Study of entrepreneurial firms in a developing economy. *Journal of Business Venturing*, 28(6), 708-727.
- Bouncken, R. B., & Fredrich, V. (2016). Learning in coopetition: Alliance orientation, network size, and firm types. *Journal of Business Research*, 69(5), 1753-1758.
- Brouthers, K. D., & Nakos, G. (2004). SME Entry Mode Choice and Performance: A Transaction Cost Perspective. *Entrepreneurship Theory and Practice*, 28(3), 229-247.
- Brouthers, K. D., Nakos, G., & Dimitratos, P. (2015). SME entrepreneurial orientation, international performance, and the moderating role of strategic alliances. *Entrepreneurship Theory and Practice*, 39(5), 1161-1187.
- Buccieri, D., Javalgi, R. G., & Cavusgil, E. (2020). International new venture performance: Role of international entrepreneurial culture, ambidextrous innovation, and dynamic marketing capabilities. *International Business Review*, 29(2), 101639.
- Cadogan, J. W., Cui, C. C., Morgan, R. E., & Story, V. M. (2006). Factors facilitating and impeding the development of export market-oriented behavior: A study of Hong Kong manufacturing exporters. *Industrial Marketing Management*, 35(5), 634-647.
- Cavusgil, S. T., & Knight, G. (2015). The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization. *Journal of International Business Studies*, 46(1), 3-16.

- Child, J., Hsieh, L., Elbanna, S., Karmowska, J., Marinova, S., Puthusserry, P., Tsai, T., Narooz, R., & Zhang, Y. (2017). SME international business models: The role of context and experience. *Journal of World Business*, 52(5), 664-679.
- Chirico, F., & Salvato, C. (2016). Knowledge internalization and product development in family firms: When relational and affective factors matter. *Entrepreneurship Theory and Practice*, 40(1), 201-229.
- Churchill, G. A. (1979). A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, 16(1), 64-73.
- Coviello, N. (2015). Re-thinking research on born globals. *Journal of International Business Studies*, 46(1), 17-26.
- Covin, J. G., & Miller, D. (2014). International Entrepreneurial Orientation: Conceptual Considerations, Research Themes, Measurement Issues, and Future Research Directions. *Entrepreneurship Theory and Practice*, 38(1), 11-44.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7-26.
- Cui, L., Fan, D., Guo, F., & Fan, Y. (2018). Explicating the relationship of entrepreneurial orientation and firm performance: Underlying mechanisms in the context of an emerging market. *Industrial Marketing Management*, 71, 27-40.
- Cuyppers, I. R. P., Ertug, G., Cantwell, J., Zaheer, A., & Kilduff, M. (2020). Making connections: Social networks in international business. *Journal of International Business Studies*.
- Dabić, M., Maley, J., Dana, L.-P., Novak, I., Pellegrini, M. M., & Caputo, A. (2019). Pathways of SME internationalization: a bibliometric and systematic review. *Small Business Economics*, 1-21.
- Dai, L., Maksimov, V., Gilbert, B. A., & Fernhaber, S. A. (2014). Entrepreneurial orientation and international scope: The differential roles of innovativeness, proactiveness, and risk-taking. *Journal of Business Venturing*, 29(4), 511-524.
- Danso, A., Adomako, S., Amankwah-Amoah, J., Owusu-Agyei, S., & Konadu, R. (2019). Environmental sustainability orientation, competitive strategy and financial performance. *Business Strategy and the Environment*, 28(5), 885-895.
- Day, G. S. (2004). The capabilities of market-driven organizations. *Journal of Marketing*, 58(4), 37-52.
- Dias, C., Gouveia Rodrigues, R., & Ferreira, J. J. (2021). Small agricultural businesses' performance—What is the role of dynamic capabilities, entrepreneurial orientation, and environmental sustainability commitment? *Business Strategy and the Environment*, 30(4), 1898-1912.
- Didonet, S. R., Fearne, A., & Simmons, G. (2019). Determining the presence of a long-term/short-term dilemma for SMEs when adopting strategic orientation to improve performance. *International Small Business Journal*, 38(2), 90-110.
- Dillman, D. A. (2011). *Mail and Internet surveys: The tailored design method--2007 Update with new Internet, visual, and mixed-mode guide* John Wiley & Sons.
- Døjbak Håkonsson, D., Eskildsen, J. K., Argote, L., Mønster, D., Burton, R. M., & Obel, B. (2016). Exploration versus exploitation: Emotions and performance as antecedents and consequences of team decisions. *Strategic Management Journal*, 37(6), 985-1001.
- Donbesuur, F., Zahoor, N., Adomako, S. J. B. S., & Environment, t. (2021). Postformation alliance capabilities and environmental innovation: The roles of environmental learning and relation-specific investments.

- Dubai-SME. (2014). *The State of Small & Medium Enterprises (SMEs) in Dubai*.
http://sme.ae/StudiesAndResearchDocument/SME_Report_English.pdf
- Elbanna, S., Abdelzaher, D. M., & Ramadan, N. (2020). Management research in the Arab World: What is now and what is next? *Journal of International Management*, 100734.
- Fainshmidt, S., Pezeshkan, A., Lance Frazier, M., Nair, A., & Markowski, E. (2016). Dynamic capabilities and organizational performance: a meta-analytic evaluation and extension. *Journal of Management Studies*, 53(8), 1348-1380.
- Falahat, M., Lee, Y. Y., Ramayah, T., & Soto-Acosta, P. (2020). Modelling the effects of institutional support and international knowledge on competitive capabilities and international performance: Evidence from an emerging economy. *Journal of International Management*, 26(4), 100779.
- Ferreira, J., Coelho, A., & Moutinho, L. (2020). Dynamic capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. *Technovation*, 92-93, 102061.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50.
- Galkina, T., & Chetty, S. (2015). Effectuation and networking of internationalizing SMEs. *Management International Review*, 55(5), 647-676.
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- Genc, E., Dayan, M., & Genc, O. F. (2019). The impact of SME internationalization on innovation: The mediating role of market and entrepreneurial orientation. *Industrial Marketing Management*, 82, 253-264.
- Gerschewski, S., Lew, Y. K., Khan, Z., & Park, B. I. (2018). Post-entry performance of international new ventures: The mediating role of learning orientation. *International Small Business Journal*, 36(7), 807-828.
- Goel, S., & Jones, R. J. (2016). Entrepreneurial Exploration and Exploitation in Family Business: A Systematic Review and Future Directions. *Family Business Review*, 29(1), 94-120.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). *Multivariate data analysis* (Eighth edition. ed.) Andover: Cengage Learning.
- Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of management Review*, 20(4), 986-1014.
- Hayes, M. H. (2009). *Statistical digital signal processing and modeling* John Wiley & Sons.
- He, X., & Wei, Y. (2011). Linking market orientation to international market selection and international performance. *International Business Review*, 20(5), 535-546.
- Helfat, C. E., & Peteraf, M. A. (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. *Strategic Management Journal*, 36(6), 831-850.
- Hennart, J. F. (2014). The accidental internationalists: a theory of born globals. *Entrepreneurship Theory and Practice*, 38(1), 117-135.
- Ho, J., Plewa, C., & Lu, V. N. (2016). Examining strategic orientation complementarity using multiple regression analysis and fuzzy set QCA. *Journal of Business Research*, 69(6), 2199-2205.
- Hong, J., Zhang, Y., & Ding, M. (2018). Sustainable supply chain management practices, supply chain dynamic capabilities, and enterprise performance. *Journal of Cleaner Production*, 172, 3508-3519.
- Hult, G. T. M., & Ketchen, D. J. (2001). Does market orientation matter?: A test of the relationship between positional advantage and performance. *Strategic Management Journal*, 22(9), 899-906.

- Ince, I., & Hahn, R. J. J. o. S. B. M. (2020). How dynamic capabilities facilitate the survivability of social enterprises: A qualitative analysis of sensing and seizing capacities. *58*(6), 1256-1290.
- İpek, İ. (2018). The resource-based view within the export context: An integrative review of empirical studies. *Journal of Global Marketing*, *31*(3), 157-179.
- İpek, İ., & Bıçakcıoğlu-Peynirci, N. (2019). Export market orientation: An integrative review and directions for future research. *International Business Review*, 101659.
- Jackson-Smith, D., Flint, C. G., Dolan, M., Trentelman, C. K., Holyoak, G., Thomas, B., & Ma, G. (2016). Effectiveness of the drop-off/pick-up survey methodology in different neighborhood types. *Journal of Rural Social Sciences*, *31*(3), 3.
- Jansson, J., Nilsson, J., Modig, F., & Hed Vall, G. (2017). Commitment to Sustainability in Small and Medium-Sized Enterprises: The Influence of Strategic Orientations and Management Values. *Business Strategy and the Environment*, *26*(1), 69-83.
- Jantunen, A., Tarkiainen, A., Chari, S., & Oghazi, P. (2018). Dynamic capabilities, operational changes, and performance outcomes in the media industry. *Journal of Business Research*, *89*, 251-257.
- Jaworski, B. J., & Kohli, A. K. (1993). Market Orientation: Antecedents and Consequences. *Journal of Marketing*, *57*(3), 53-70.
- Jiang, W., Mavondo, F., & Zhao, W. (2020). The impact of business networks on dynamic capabilities and product innovation: The moderating role of strategic orientation. *Asia Pacific Journal of Management*, *37*(4), 1239-1266.
- Jiang, X., Yang, Y., Pei, Y.-L., & Wang, G. (2016). Entrepreneurial Orientation, Strategic Alliances, and Firm Performance: Inside the Black Box. *Long range planning*, *49*(1), 103-116.
- Kafouros, M., & Aliyev, M. (2016). Institutions and foreign subsidiary growth in transition economies: The role of intangible assets and capabilities. *Journal of Management Studies*, *53*(4), 580-607.
- Kandemir, D., Yaprak, A., & Cavusgil, S. T. (2006). Alliance Orientation: Conceptualization, Measurement, and Impact on Market Performance. *Journal of the Academy of Marketing Science*, *34*(3), 324-340.
- Karami, M., Ojala, A., & Saarenketo, S. J. J. o. S. B. M. (2020). Entrepreneurial orientation and international opportunity development by SMEs: The mediating role of decision-making logic. 1-29.
- Karami, M., & Tang, J. (2019). Entrepreneurial orientation and SME international performance: The mediating role of networking capability and experiential learning. *International Small Business Journal*, *37*(2), 105-124.
- Kauppila, O.-P. (2015). Alliance Management Capability and Firm Performance: Using Resource-based Theory to Look Inside the Process Black Box. *Long range planning*, *48*(3), 151-167.
- Khan, Z., & Lew, Y. K. (2018). Post-entry survival of developing economy international new ventures: A dynamic capability perspective. *International Business Review*, *27*(1), 149-160.
- Kohtamäki, M., Rabetino, R., & Möller, K. (2018). Alliance capabilities: A systematic review and future research directions. *Industrial Marketing Management*, *68*, 188-201.
- Kozlenkova, I. V., Samaha, S. A., & Palmatier, R. W. (2014). Resource-based theory in marketing. *Journal of the Academy of Marketing Science*, *42*(1), 1-21.
- Laaksonen, O., & Peltoniemi, M. (2018). The essence of dynamic capabilities and their measurement. *International Journal of Management Reviews*, *20*(2), 184-205.

- Lado, A. A., Boyd, N. G., & Wright, P. (1992). A competency-based model of sustainable competitive advantage: Toward a conceptual integration. *Journal of management*, 18(1), 77-91.
- Lee, H., Kelley, D., Lee, J., & Lee, S. (2012). SME survival: The impact of internationalization, technology resources, and alliances. *Journal of Small Business Management*, 50(1), 1-19.
- Lee, J. M., Narula, R., & Hillemann, J. (2021). Unraveling asset recombination through the lens of firm-specific advantages: A dynamic capabilities perspective. *Journal of World Business*, 56(2), 101193.
- Leiblein, M. J. (2011). What Do Resource- and Capability-Based Theories Propose? *Journal of management*, 37(4), 909-932.
- Leischnig, A., & Geigenmüller, A. (2020). Examining alliance management capabilities in university-industry collaboration. *The Journal of Technology Transfer*, 45(1), 9-30.
- Lew, Y. K., Sinkovics, R. R., & Kuivalainen, O. (2013). Upstream internationalization process: Roles of social capital in creating exploratory capability and market performance. *International Business Review*, 22(6), 1101-1120.
- Li, G., Lu, S., Shao, S., Yang, L., & Zhang, K. (2021). Do environmental regulations hamper small enterprises' market entry? Evidence from China. *Business Strategy and the Environment*, 30(1), 252-266.
- Li, L., Jiang, F., Pei, Y., & Jiang, N. (2017). Entrepreneurial orientation and strategic alliance success: The contingency role of relational factors. *Journal of Business Research*, 72, 46-56.
- Lin, Z., Cao, X., Cottam, E. J. E., & Development, R. (2020). International networking and knowledge acquisition of Chinese SMEs: the role of global mind-set and international entrepreneurial orientation. 32(5-6), 449-465.
- Liu, Y., Li, Y., & Xue, J. (2011). Ownership, strategic orientation and internationalization in emerging markets. *Journal of World Business*, 46(3), 381-393.
- Ljungkvist, T., & Andersén, J. (2021). A taxonomy of ecopreneurship in small manufacturing firms: A multidimensional cluster analysis. *Business Strategy and the Environment*, 30(2), 1374-1388.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the Entrepreneurial Orientation Construct and Linking It To Performance. *Academy of management Review*, 21(1), 135-172.
- Martin, S. L., Javalgi, R. G., & Cavusgil, E. (2017). Marketing capabilities, positional advantage, and performance of born global firms: Contingent effect of ambidextrous innovation. *International Business Review*, 26(3), 527-543.
- Martineau, C., & Pastoriza, D. (2016). International involvement of established SMEs: A systematic review of antecedents, outcomes and moderators. *International Business Review*, 25(2), 458-470.
- McKelvie, A., Wiklund, J., & Brattström, A. (2017). Externally Acquired or Internally Generated? Knowledge Development and Perceived Environmental Dynamism in New Venture Innovation. *Entrepreneurship Theory and Practice*, 42(1), 24-46.
- Meschi, P.-X., Ricard, A., & Moore, E. T. (2017). Fast and furious or slow and cautious? The joint impact of age at internationalization, speed, and risk diversity on the survival of exporting firms. *Journal of International Management*, 23(3), 279-291.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management science*, 29(7), 770-791.
- Mu, J., Thomas, E., Peng, G., & Di Benedetto, A. (2017). Strategic orientation and new product development performance: The role of networking capability and networking ability. *Industrial Marketing Management*, 64, 187-201.

- Mudalige, D., Ismail, N. A., & Malek, M. A. (2019). Exploring the Role of Individual Level and Firm Level Dynamic Capabilities in SMEs' Internationalization. *Journal of International Entrepreneurship*, 17(1), 41-74.
- Nakos, G., Dimitratos, P., & Elbanna, S. (2019). The mediating role of alliances in the international market orientation-performance relationship of smes. *International Business Review*, 28(3), 603-612.
- Nayak, A., Chia, R., & Canales, J. I. (2019). Non-cognitive microfoundations: understanding dynamic capabilities as idiosyncratically refined sensitivities and predispositions. *Academy of management Review*(ja).
- Newbert, S. L. (2007). Empirical research on the resource-based view of the firm: an assessment and suggestions for future research. *Strategic Management Journal*, 28(2), 121-146.
- Oura, M. M., Zilber, S. N., & Lopes, E. L. (2016). Innovation capacity, international experience and export performance of SMEs in Brazil. *International Business Review*, 25(4), 921-932.
- Pascucci, F., Bartoloni, S., & Gregori, G. L. (2016). Export market orientation and international performance in the context of SMEs. *Journal of Small Business & Entrepreneurship*, 28(5), 361-375.
- Pehrsson, A. (2016). Firm's strategic orientation, market context, and performance: Literature review and opportunities for international strategy research. *European Business Review*, 28(4), 378-404.
- Pinho, J. C., & Prange, C. (2016). The effect of social networks and dynamic internationalization capabilities on international performance. *Journal of World Business*, 51(3), 391-403.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879.
- Prange, C., & Pinho, J. C. (2017). How personal and organizational drivers impact on SME international performance: The mediating role of organizational innovation. *International Business Review*, 26(6), 1114-1123.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, 36(4), 717-731.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods*, 40(3), 879-891.
- Robson, M. J., Katsikeas, C. S., Schlegelmilch, B. B., & Pramböck, B. (2019). Alliance capabilities, interpartner attributes, and performance outcomes in international strategic alliances. *Journal of World Business*, 54(2), 137-153.
- Rodrigo-Alarcón, J., García-Villaverde, P. M., Ruiz-Ortega, M. J., & Parra-Requena, G. (2018). From social capital to entrepreneurial orientation: The mediating role of dynamic capabilities. *European Management Journal*, 36(2), 195-209.
- Rungtusanatham, M., Miller, J., & Boyer, K. (2014). Theorizing, testing, and concluding for mediation in SCM research: tutorial and procedural recommendations. *Journal of Operations Management*, 32(3), 99-113.
- Sakhdari, K., Burgers, J. H., & Davidsson, P. (2020). Alliance portfolio management capabilities, corporate entrepreneurship, and relative firm performance in SMEs. *Journal of Small Business Management*, 1-29.

- Schilke, O., Hu, S., & Helfat, C. E. (2018). Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. *Academy of Management Annals*, 12(1), 390-439.
- Schweiger, S. A., Stettler, T. R., Baldauf, A., & Zamudio, C. (2019). The complementarity of strategic orientations: A meta-analytic synthesis and theory extension. *Strategic Management Journal*, 40(11), 1822-1851.
- Semrau, T., Ambos, T., & Sascha, K. (2016). Entrepreneurial orientation and SME performance across societal cultures: An international study. *Journal of Business Research*, 69(5), 1928-1932.
- Shayah, M. H. (2015). Economic diversification by boosting non-oil exports (case of UAE). *J. Eco. Bus. Manage.(JOEBM)*, 3(7), 735-738.
- Silva, G. M., Gomes, P. J., Carvalho, H., & Geraldés, V. (2021). Sustainable development in small and medium enterprises: The role of entrepreneurial orientation in supply chain management. *Business Strategy and the Environment*, n/a(n/a).
- Singh, S., Darwish, T. K., & Potočnik, K. (2016). Measuring Organizational Performance: A Case for Subjective Measures. *British Journal of Management*, 27(1), 214-224.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology*, 13, 290-312.
- Solano Acosta, A., Herrero Crespo, Á., & Collado Agudo, J. (2018). Effect of market orientation, network capability and entrepreneurial orientation on international performance of small and medium enterprises (SMEs). *International Business Review*, 27(6), 1128-1140.
- Srivastava, R. K., Fahey, L., & Christensen, H. K. (2001). The resource-based view and marketing: The role of market-based assets in gaining competitive advantage. *Journal of management*, 27(6), 777-802.
- Stoian, M.-C., Dimitratos, P., & Plakoyiannaki, E. (2018). SME internationalization beyond exporting: A knowledge-based perspective across managers and advisers. *Journal of World Business*, 53(5), 768-779.
- Suddaby, R., Coraiola, D., Harvey, C., & Foster, W. (2020). History and the micro-foundations of dynamic capabilities. *Strategic Management Journal*, 41(3), 530-556.
- Tabachnick, B. G., & Fidell, L. (2012). *Using multivariate statistics* (6 ed.) Boston: Pearson Education Limited.
- Tajeddin, M., & Carney, M. (2019). African Business Groups: How Does Group Affiliation Improve SMEs' Export Intensity? *Entrepreneurship Theory and Practice*, 43(6), 1194-1222.
- Tan, Q., & Sousa Carlos, M. P. (2015). Leveraging marketing capabilities into competitive advantage and export performance. *International Marketing Review*, 32(1), 78-102.
- Tasheva, S., & Nielsen, B. B. (2020). The role of global dynamic managerial capability in the pursuit of international strategy and superior performance. *Journal of International Business Studies*.
- Teece, D. J. (2000). Strategies for managing knowledge assets: the role of firm structure and industrial context. *Long range planning*, 33(1), 35-54.
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319-1350.
- Teece, D. J. (2010). Business models, business strategy and innovation. *Long range planning*, 43(2-3), 172-194.
- Teece, D. J. (2012). Dynamic capabilities: Routines versus entrepreneurial action. *Journal of Management Studies*, 49(8), 1395-1401.
- Teece, D. J. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45(1), 8-37.

- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Terjesen, S., Hessels, J., & Li, D. (2013). Comparative International Entrepreneurship: A Review and Research Agenda. *Journal of management*, 42(1), 299-344.
- Thanos, I. C., Dimitratos, P., & Sapouna, P. (2016). The implications of international entrepreneurial orientation, politicization, and hostility upon SME international performance. *International Small Business Journal*, 35(4), 495-514.
- TradingEconomics. (2020). *United Arab Emirates GDP Growth Rate 2000-2019 Data* <https://tradingeconomics.com/United-Arab-Emirates/gdp-growth>
- U.AE. (2021). *Green Economy for Sustainable Development*. The United Arab Emirates' Government portal. <https://u.ae/en/about-the-uae/economy/green-economy-for-sustainable-development>
- Villar, C., Alegre, J., & Pla-Barber, J. (2014). Exploring the role of knowledge management practices on exports: A dynamic capabilities view. *International Business Review*, 23(1), 38-44.
- Wales, W. J., Gupta, V. K., & Mousa, F.-T. (2011). Empirical research on entrepreneurial orientation: An assessment and suggestions for future research. *International Small Business Journal*, 31(4), 357-383.
- Wales, W. J., Parida, V., & Patel, P. C. (2013). Too much of a good thing? Absorptive capacity, firm performance, and the moderating role of entrepreneurial orientation. *Strategic Management Journal*, 34(5), 622-633.
- Wang, L. L., & Gao, Y. (2021). Competition network as a source of competitive advantage: The dynamic capability perspective and evidence from China. *Long range planning*, 54(2), 102052.
- Weaven, S., Quach, S., Thaichon, P., Frazer, L., Billot, K., & Grace, D. (2021). Surviving an economic downturn: Dynamic capabilities of SMEs. *Journal of Business Research*, 128, 109-123.
- Wernerfelt, B. (1995). The resource-based view of the firm: Ten years after. *Strategic Management Journal*, 16(3), 171-174.
- Wilden, R., Devinney, T. M., & Dowling, G. R. (2016). The architecture of dynamic capability research identifying the building blocks of a configurational approach. *Academy of Management Annals*, 10(1), 997-1076.
- Wilden, R., Gudergan, S. P., Nielsen, B. B., & Lings, I. (2013). Dynamic Capabilities and Performance: Strategy, Structure and Environment. *Long range planning*, 46(1), 72-96.
- Xu, H., Guo, H., Zhang, J., & Dang, A. (2018). Facilitating dynamic marketing capabilities development for domestic and foreign firms in an emerging economy. *Journal of Business Research*, 86, 141-152.
- Zahoor, N., & Gerged, A. M. (2021). Relational capital, environmental knowledge integration, and environmental performance of small and medium enterprises in emerging markets. *Business Strategy and the Environment*, n/a(n/a).
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and Dynamic Capabilities: A Review, Model and Research Agenda*. *Journal of Management Studies*, 43(4), 917-955.
- Zhang, J., & Wu, W.-p. (2017). Leveraging internal resources and external business networks for new product success: A dynamic capabilities perspective. *Industrial Marketing Management*, 61, 170-181.
- Zhang, X., Ma, X., & Wang, Y. (2012). Entrepreneurial orientation, social capital, and the internationalization of SMEs: Evidence from China. *Thunderbird International Business Review*, 54(2), 195-210.

- Zhao, X., Lynch Jr, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of consumer research*, 37(2), 197-206.
- Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization science*, 13(3), 339-351.

Tables and Figures

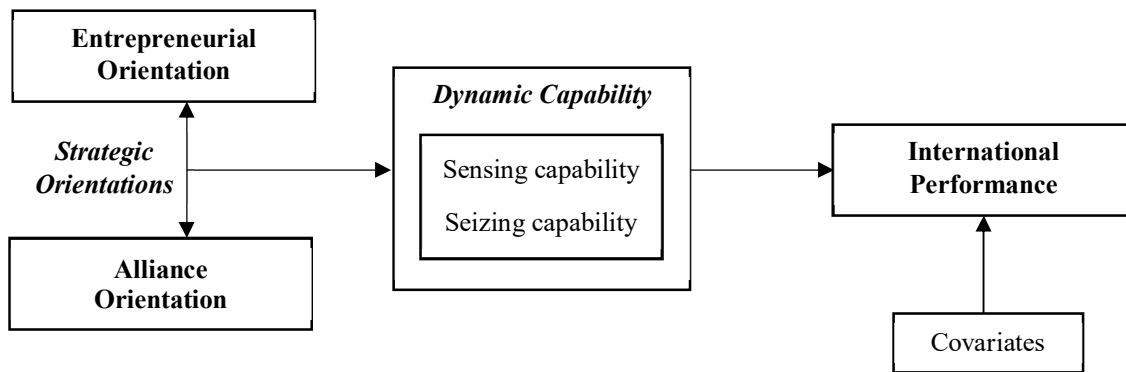


Figure 1. Conceptual framework

Table 1. Fit indices for the measurement models.

CFA models	χ^2/DF	p-Value	RMSEA	SRMR	NFI	CFI
Measurement (set 1)	1.02	0.40 ^a	0.01	0.02	0.99	0.99
Measurement (set 2)	1.36	0.11 ^a	0.04	0.02	0.98	0.99
Measurement (set 3)	1.61	0.07	0.05	0.03	0.98	0.99
Full measurement (set 4)	1.11	0.06	0.02	0.04	0.91	0.99

Note. Measurement (set 1): innovation, risk-taking and proactiveness. Measurement (set 2): alliance scanning, alliance coordination, and alliance learning. Measurement (set 3): sensing and seizing. Full measurement (set 4): all items retained in set 1 through to set 3 were modeled simultaneously along with international performance and environmental uncertainty. RMSEA = root mean square error of approximation; NFI = normed fit index; CFI = comparative fit index; SRMR = standardized root-mean square residual. ^a not significant at $\alpha = 0.05$.

Table 2. Results of measurement model

Constructs and items	Loadings
<i>Innovation (CA = 0.86; CR = 0.86; AVE = 0.67)</i>	
A strong emphasis on R&D, technological leadership, and innovation.	0.82
Having many new lines of products or services.	0.85
Changes in product or service lines have usually been quite dramatic	0.78
<i>Risk-taking (CA = 0.86; CR = 0.87; AVE = 0.69)</i>	
A strong emphasis on high-risk projects with chances of very high returns.	0.75
A bold and aggressive posture to maximizing the probability of exploiting potentials when faced with uncertainty.	0.90
Owing to the environment, bold and a wide-range of actions are necessary to achieve the firm's objectives.	0.84
<i>Proactiveness (CA = 0.79; CR = 0.80; AVE = 0.58)</i>	
Usually initiating actions to which competitors will respond.	0.95
Very often being the first firm to introduce new products/services technologies.	0.70
Usually adopting a very competitive and “undo-the competitor” posture.	0.71
<i>Alliance scanning (CA = 0.92; CR = 0.92; AVE = 0.80)</i>	
We actively monitor our environment to identify partnering opportunities.	0.88
We routinely gather information about prospective partners from various forums (e.g. trade shows, industry conventions, databases, publications, internet etc.).	0.90
We are alert to market developments that create potential alliance opportunities.	0.90
<i>Alliance coordination (CA = 0.92; CR = 0.92; AVE = 0.80)</i>	
Our activities across different alliances are well coordinated.	0.91
We systematically coordinate our strategies across different alliances.	0.85
We have processes to systematically transfer knowledge across alliance partners.	0.92
<i>Alliance learning (CA = 0.92; CR = 0.93; AVE = 0.81)</i>	
We conduct periodic reviews of our alliances to understand what we are doing right and where we are going wrong.	0.93
We periodically collect and analyze field experiences from our alliances.	0.90
We modify our alliance related procedures as we learn from experience.	0.87
<i>Sensing capability (CA = 0.91; CR = 0.92; AVE = 0.73)</i>	
Exploring opportunities and options	0.84
Detecting new market opportunities and product solution options	0.84
Spotting new market and technology possibilities	0.86
Identifying trends in customer needs	0.89
<i>Seizing capability (CA = 0.84; CR = 0.84; AVE = 0.64)</i>	
Seize most business opportunities when they emerge	0.89
Catch many new opportunities available in the market	0.80
Grab new product development opportunities resulting from changes in technologies.	0.70
<i>International performance (CA = 0.92; CR = 0.92; AVE = 0.75)</i>	
Our most important market has been profitable during the past three years.	0.89
Our most important market has achieved rapid sales growth during the past three years.	0.86
Our most important market has satisfactory export performance during the past three years.	0.86
Our most important market has achieved our company's initial strategic objectives during the past three years.	0.87
<i>Environmental uncertainty (CA = 0.85; CR = 0.86; AVE = 0.60)</i>	
We operate in an environment where technology is changing rapidly.	0.82
The rate of product/service obsolescence in this industry is very high.	0.71
Our production and service technologies change often and in major ways	0.83
Our new customers have product related needs that are very different from those of our existing customers	0.73

Model fit indices: $\chi^2 = 484.28$; $p > 0.05$; $\chi^2/DF (436) = 1.12$; CFI = 0.98; IFI = 0.98; GFI = 0.89; RMSEA = 0.02; SRMR = 0.04.

Notes: CA = Cronbach's alpha; CR = composite reliability; AVE = average variance extracted.

Table 3. Means, standard deviations, and correlations.

Variables	M	SD	1	2	3	4	5	6	7	8	9	10
1. Innovation	5.23	1.11	0.818									
2. Risk-taking	5.19	0.99	0.36**	0.83								
3. Proactiveness	3.95	1.23	0.07	0.01	0.76							
4. Alliance scanning	4.87	1.30	0.09	0.17*	0.05	0.89						
5. Alliance coordination	4.8	1.36	-0.04	0.13	0.16*	0.70**	0.90					
6. Alliance learning	4.98	1.28	0.07	0.18*	0.09	0.71**	0.84**	0.90				
7. Sensing	4.62	1.16	0.24**	0.22**	0.13	0.35**	0.24**	0.30**	0.86			
8. Seizing	4.87	1.04	0.14 [†]	0.41**	0.21*	0.20*	0.16	0.13	0.29**	0.80		
9. International performance	4.93	1.25	0.22**	0.27**	0.16	0.30**	0.23**	0.28**	0.64**	0.47**	0.87	
10. Environmental uncertainty	5.23	1.11	0.04	-0.06	-0.18*	-0.10	-0.08	-0.08	0.01	-0.18*	0.03	0.77
11. Firm size [#]	4.22	0.98	0.03	0.11	-0.13 [†]	0.11	0.14*	0.11	-0.04	-0.04	-0.05	-0.08
12. Firm age [#]	2.78	0.69	-0.07	0.04	0.05	0.09	0.17*	0.08	0.07	0.02	-0.05	-0.04
13. Industry [~]	1.86	0.82	0.02	-0.03	0.17*	-0.01	0.01	-0.04	-0.02	0.01	-0.05	-0.03
14. Managerial experience [#]	2.01	0.48	0.01	-0.01	-0.08	0.15*	0.14*	0.18*	0.05	0.10	-0.05	-0.07
15. International experience [#]	1.98	0.66	-0.12	0.05	0.12 [†]	0.13 [†]	0.17*	0.09	0.10	0.01	0.01	-0.11

Notes: Bold diagonal entries are square root of AVEs; [†]p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001; M = Mean; SD = Standard Deviation; #: Natural logarithm transformation of the original values; M = Mean; SD = Standard Deviation; [†] = Dummy variable.

Table 4. Results of regression analysis.

	Dynamic capability		International performance			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Control variables						
Firm size [#]	-0.06 (-0.84)	-0.06 (-0.93)	-0.06 (-0.86)	-0.07 (-1.05)	-0.02 (-0.42)	-0.04
Firm age [#]	0.04 (0.42)	0.001 (0.01)	0.08 (0.79)	0.04 (0.43)	0.05 (0.68)	0.02
Industry [~]	-0.01 (-0.09)	-0.04 (-0.64)	-0.04 (-0.63)	-0.07 (-1.10)	-0.04 (-0.75)	-0.05
Managerial experience [#]	0.08 (1.18)	0.05 (0.76)	-0.05 (-0.69)	-0.09 (-1.41)	-0.10 (-1.92) ⁺	-0.12*
International experience [#]	0.05 (0.51)	0.05 (0.53)	-0.50 (-0.50)	-0.06 (-0.62)	-0.08 (-1.10)	-0.06
Environmental uncertainty	-0.04 (-0.62)	-0.02 (-0.25)	0.01 (0.16)	0.04 (0.55)	0.04 (0.74)	0.04 (0.84)
Main effects						
Environmental orientation (EO)		0.34 (5.39) ***		0.27 (4.16) ***		0.07 (1.25)
Alliance orientation (AO)		0.26 (3.99) ***		0.29 (4.33) ***		0.14 (2.40) *
EO x AO		0.19 (2.93) **		0.17 (2.66) **		0.06 (1.18)
Dynamic capability					0.66 (12.34) ***	0.58 (9.75) ***
Fit statistics						
R ²	0.02	0.24	0.01	0.20	0.43	0.46
Adjusted R ²	-0.10	0.21	-0.02	0.16	0.41	0.43
F value	0.65	7.08	0.37	5.57	22.32	16.85
Highest VIFs	2.11	2.16	2.11	2.13	2.11	2.16

Notes: Standardized coefficients are reported with T-values in parentheses (two-tailed test). * p < 0.05; ** p < 0.01; *** p < 0.001; #: Natural logarithm transformation of the original values. ~ = Dummy variable.

Table 5. Results of mediation effect using bootstrapping and Sobel tests.

	Unstandardized value	LL 95% CI	UL 95% CI
Indirect effect	0.16	0.04	0.28

Notes: †p < 0.10; *p < 0.05; **p < 0.01; ***p < 0.001; LL = lower limit; UL = upper limit; CI = confidence interval.