



Exploring the Role of Individual Level and Firm Level Dynamic Capabilities in SMEs' Internationalization

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Abstract

This paper presents a multi-level model that examines the impact of dynamic capabilities on the internationalization of SMEs while taking into account the interactions among them. The purpose of the research is to understand the applicability of dynamic capabilities at the individual and the firm level to the SME internationalization process in developing country context and to assess to what extent a firm's asset position and individual level dynamic capabilities influence the generation of firm level dynamic capabilities in SMEs. First, the dynamic capabilities theory was theoretically linked to the internationalization phenomenon. The relationships among firm-level dynamic capabilities, individual-level dynamic capabilities (owner specific dynamic capabilities), and internationalization were identified. The research framework and hypotheses were developed and empirically tested with 197 SMEs. The findings established that owner-specific dynamic capabilities have a positive influence on both firm dynamic capabilities and internationalization, and firm dynamic capabilities positively influence internationalization. It was also found that the market assets position measured as perceptual environmental dynamism positively influenced firm dynamic capabilities but structural and reputational asset positions of SMEs did not influence generation of firm dynamic capabilities. Moreover, firm dynamic capabilities had a mediation effect in the relationship between owner-specific dynamic capabilities and internationalization. Theoretically, this confirms the relevance of dynamic capability theory to internationalization and the possibility of integrating existing internationalization theories. Entrepreneurs, SME managers, and policy-makers could gain valuable insights on how entrepreneur and firm capabilities lead to better international prospects from this outcome.

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Résumé

Ce document présente un modèle à plusieurs niveaux qui examine l'impact des capacités dynamiques sur l'internationalisation des PME tout en tenant compte des interactions que ces capacités ont entre elles. L'objectif de la recherche est de comprendre l'applicabilité des capacités dynamiques au niveau individuel et au niveau de l'entreprise au processus d'internationalisation des PME dans le contexte des pays en développement et d'évaluer dans quelle mesure la position des actifs d'une entreprise et les capacités dynamiques au niveau individuel influencent la génération de capacités dynamiques au niveau de l'entreprise au sein des PME. Premièrement, la théorie des capacités dynamiques était théoriquement liée au phénomène de l'internationalisation. Les relations entre les capacités dynamiques au niveau de l'entreprise, les capacités dynamiques au niveau individuel (capacités dynamiques propres au patron) et l'internationalisation ont été identifiées. Le cadre de recherche et les hypothèses ont été élaborés et testés de façon empirique auprès de 197 PME. Les résultats ont établi que les capacités dynamiques propres au patron ont une influence positive sur les capacités dynamiques de l'entreprise et que l'internationalisation et les capacités dynamiques de l'entreprise ont une influence positive sur l'internationalisation. Il a également été constaté que la position des actifs du marché mesurée en tant que dynamique environnementale perceptuelle influençait positivement les capacités dynamiques de l'entreprise, mais que les positions structurelles et de réputation des PME n'influençaient pas la génération de capacités dynamiques de l'entreprise. En outre, les capacités dynamiques de l'entreprise ont eu un effet de médiation dans la relation entre les capacités dynamiques propres au patron et l'internationalisation. Théoriquement, cela confirme la pertinence de la théorie des capacités dynamiques pour l'internationalisation et la possibilité qu'elle a d'intégrer les théories de l'internationalisation existantes. Les entrepreneurs, les gestionnaires de PME et les décideurs politiques pourraient acquérir des connaissances précieuses sur la façon dont les capacités des entrepreneurs et des entreprises mènent à de meilleures perspectives internationales à partir de ce résultat.

Keywords Dynamic capabilities · Entrepreneurship orientation · SME · Internationalization

Summary Highlights

Contributions of the Paper: Develops a multi-level model that examines the impact of dynamic capabilities on the internationalization of SMEs

Research Purpose: To understand the applicability of dynamic capabilities at individual and firm level to the SME internationalization process in developing country context and to assess to what extent a firm's asset position and individual-level dynamic capabilities influence the generation of firm-level dynamic capabilities in SMEs.

Methodology: Quantitative research methodology was used and the conceptual model was empirically tested with 197 SMEs using a questionnaire.

Data base/Information: SMEs of Annual Registry of Export Development Board.

Results/Findings: Owner-specific dynamic capabilities have a positive influence on both firm dynamic capabilities and internationalization and firm dynamic capabilities

positively influence internationalization. Market asset position measured as perceptual environmental dynamism positively influenced firm dynamic capabilities, but structural and reputational asset positions of SMEs did not influence generation of firm dynamic capabilities. Moreover, firm dynamic capabilities had a mediation effect in the relationship between owner-specific dynamic capabilities and internationalization.

Limitations: The results are limited to the context of investigation which is developing country context.

Managerial/Theoretical Implications and Recommendations for Further Research: Confirms the relevance of dynamic capability theory to internationalization and the possibility of integrating existing internationalization theories

Public Policy Recommendation: Policy-makers could gain valuable insights on how entrepreneur and firm capabilities lead to better international prospects

Introduction

The low performance and low survival rate of SMEs compared to their larger counterparts limit their potential valuable contribution to an economy (Mahzan and Yan 2014; Ropega 2011). Past research has indicated that internationalization strengthens SME competitiveness and survival prospects (Zhou and Wu 2014; Lee et al. 2012; Xuemei 2011). Further, empirical research has established that internationalization increased revenue and growth (United States International Trade Commission [USITC] 2010), supported innovative capability (Kalinic and Forza 2012), and improved productivity (Coviello et al. 2011) of SMEs compared to non-internationalized SMEs. Internationalization is considered a critical success factor in the strategy of SMEs to achieve growth, competitiveness and superior performance because of diversification advantages, economies of scale, and learning advantages (Toulova et al. 2015; Coviello et al. 2011; Ruirok and Wagner 2003). From a theoretical perspective, the above advantages can be expounded upon by eclectic theory (Dunning 1988) and organizational learning theory (Slater and Narver 1995).

According to calculations based on World Bank Enterprise Surveys covering more than 25,000 SMEs in developing countries, direct exports income represented just 7.6% of the total sales of SMEs. SMEs contribute less than 34% of exports, on average, even in developed economies (World Trade Organization 2016). Because SMEs make up more than 95% of the market participants, it is evident that their contributions to trade and investment in international market are disproportionate and very low (Organization for Economic Cooperation and Development [OECD] 2004). Succinctly put, SMEs are under-represented in the international economy across all countries implying a highly skewed export structure (Committee for Economic and Commercial Cooperation [COMCEC] 2013). The key question that remains open is that if internationalization provides a multitude of benefits to SMEs, then why are their contributions to international business activities minimal compared to large firms in developing countries? It is this background that warrants an investigation into SME internationalization process to understand its key determinants.

Until recently, the internationalization research had focused on Multi-National Companies (MNCs), and the SME internationalization phenomenon remains less understood (Kazlauskaitė et al. 2015; Korsakienė and Tvaronavičienė 2012; Ruzzier et al. 2006). Mejri and Umamoto (2010) argue that previous SME internationalization research has

considered only fragmented aspects of internationalization, leading to an unclarified overall picture. A number of questions about the SME internationalization process remain open (Coviello 2015). Coviello et al. (2011) mentioned that internationalization theories should be supported with multi-theoretical perspectives. The literature reveals that neither traditional theories such as economic models of internationalization, process models, network perspective, nor international entrepreneurship theory per se are sufficient to explain the phenomenon of SME internationalization successfully (Cavusgil and Knight 2015).

Thus, a call has been made for more empirical information due to the inadequacy of research on the internationalization of SMEs (Andersson et al. 2014; Banalieva and Sarathy 2011). Moreover, studies on SME internationalization have been conducted primarily on firms in developed economies; hence, these findings may not be applicable directly to SMEs from emerging or developing economies (Rahman et al. 2017; Coviello 2015; Mi and Baharun 2013). Clear international differences exist in peoples' attitudes and inclinations to become involved in international entrepreneurial activities (Amoros and Bosma 2014). As far as the developing economies are concerned in which weak institutional frameworks are operating, SMEs experience enormous challenges with internationalization (Smallbone and Welter 2001). Entrepreneurs in developing countries tend to rely more on social capital in preparation for international market activities than entrepreneurial orientation (Dasanayaka and Sardana 2011). Nichter and Goldmark (2005) observed that the entrepreneurs in developing countries have to be more creative than in the developed countries if they are to overcome obstacles such as dysfunctional legal and financial systems, distorted markets, and unequal access to resources. Due to non-conducive macro-economic factors, the impact of owner-specific characteristics plays a major role in the determination of SME internationalization and performance in developing countries (Javalgi and Todd 2011). Etemed (2004), with his integrative conceptual framework of SME internationalization, suggests that liberalization of international markets, advances in information and communication and transportation technology, attraction and resources of partners, and serving current buyers and suppliers determine the extent of internationalization of SME. As these factors also help determine and shape the generation of dynamic capabilities related to internationalization, entrepreneurs from developing countries may be at a disadvantage and rely more on individual international experience to minimize risk. A lack of empirical studies in developing countries places the applicability of the findings of internationalization studies to developing countries in question (Hennart 2012).

Recent literature suggests that contemporary firm internationalization is not associated with traditional factors such as financial assets, physical assets, or infrastructure. Instead, successful internationalization seems to be associated with directly unobservable owner and firm factors, which are rooted in dynamic capabilities (Teece 2014; Pangerl 2013; Evers 2011). Accordingly, the dynamic capabilities of internationalized SMEs must be more amplified than those of a less ambitious, purely domestic SME (Teece 2014). The dynamic capabilities view has been used to extend the current internationalization theories such as Dunning's eclectic model, the Uppsala model, the network model, and the international entrepreneurship model (Teece 2014; Lanza and Passarelli 2014; Al-Aali and Teece 2013; Schweizer et al. 2010). However, dynamic capabilities in SME internationalization have been addressed by researchers only since the emergence of ambidexterity research literature (Hsu et al. 2013a; Prange

and Verdier 2011; Luo 2000). Most of the research related to dynamic capabilities is carried out in the context of developed countries, confined to high-tech industry sectors or in the context of large-scale organizations (Lisboa et al. 2013).

The presence of certain types of resources and capabilities can trigger the internationalization of a firm or change its patterns. Of these organizational capabilities, dynamic capabilities have been stated as the most essential and critical in dynamic international business environment (Teece 2014). Dynamic capabilities are among the most recognized determinants of success in small firm internationalization (Swoboda and Olejnik 2016). A number of past studies have linked dynamic capabilities theory to the internationalization phenomenon successfully (Dietmar et al. 2013; Villar et al. 2013). However, there is still a scarcity of studies linking dynamic capabilities and internationalization (Swoboda and Olejnik 2016).

Most empirical studies have correlated dynamic capabilities with internationalization performance and/or have examined success of firms in developed nations in the high-tech industry context (O'Cass and Weerawardena 2010). However, the role and applicability of dynamic capabilities in internationalization could be different in developing countries and in the low-tech industry context (Zhou et al. 2016). Dimensions of culture that characterize individual behavior such as individualism, masculinity, and uncertainty avoidance influence SME internationalization to different extents in different contexts (Ketkar and Acs 2013). Furthermore, firm-specific factors hold more weight for SMEs from developed countries (Ketkar and Acs 2013). Developing country SMEs might need to place greater importance on governance and other environmental factors in decision-making. Therefore, allocating resources by SMEs in developing countries into international activity involves a complex and prompt interaction of firm and environmental issues, which require dynamic capabilities to a greater extent. Some empirical research suggests that the international success of small exporters from emerging economies may stem from their ability to facilitate and nurture dynamic cooperative relationships with strategic partners, rather than through entrepreneurial risk taking (Pham et al. 2017). Moreover, firms from low-tech traditional industries tend to operate in less affluent environments and often have more limited resources compared with those from high-tech industries, which makes their internationalization paths unique (Pham et al. 2017).

The existing models of internationalization do not consider the multi-level relationships within the organization that shape dynamic capabilities (Rothaermel and Hess 2007; Carlos and Pinho 2011). Hence, a limited number of studies have attempted to find the mediation role organizational dynamic capabilities in the individual-level capabilities and internationalization relationship. As per work of Pundziene and Teece (2016) and Tallott and Hilliard (2016), research should investigate the effect of the behavioral and cognitive characteristics of decision-makers and individuals on the dynamic capabilities of the organization in internationalization process. Conceptual and empirical support for this argument is found in Evers (2011), Weerawardena et al. (2007), Dietmar et al. (2013), and Pinho and Prange (2016).

The motivation for the research can be related to the empirical background where the contributions of SMEs to international business remain low and stagnant. The lack of empirical studies on what and how organizational capabilities and individual entrepreneur characteristics determine the success of internationalization hinders a complete understanding of internationalization entrepreneurship phenomenon.

In light of the above background, this research is designed to assess the influence of dynamic capabilities on SME internationalization at multi-levels. This research addresses the limitations of the application of the dynamic capabilities theory when considering developing countries and a low-tech industry context for international new ventures. It brings to light which particularities are important in developing country and the low-industry context, and how these particularities are expected to affect to the internationalization of SMES, and if the internationalization of SMEs in these countries contravenes existing research. This study is one of the very few empirical studies that have been conducted on this perspective in developing countries. By focusing on Sri Lanka, the study provides fresh insights surrounding the internationalization pathway for firms in emerging markets. Thus, this research will contribute to enhancement of the understanding of the dynamic capabilities that facilitate internationalization process of SMEs in developing countries especially by focusing on individual- and firm-level antecedents of dynamic capabilities and the interactions among these variables.

The next section of this paper presents the literature review related to identification of the main constructs and the relationships among the constructs followed by the research framework. The research methodology and measurement scales are given thereafter. The “[Analysis and results](#)” section presents the data analysis carried out using partial least squares structural equation modeling (PLS-SEM) and the major findings. Consequently, this paper discusses the findings and implications followed by the conclusion.

Literature Review

Johanson and Vahlne (1977) explained that firms internationalize according to a chain of establishment, which became known as the Uppsala model of internationalization. The behavioral school of thought of internationalization explains the influence of international experience (i.e., accumulated international knowledge) on the speed and direction of consequent internationalization (Johanson and Vahlne 1977). A basic assumption of the Uppsala model is that a lack of knowledge about foreign markets is a major hindrance to internationalization, and such knowledge can only be partly acquired from sources other than organizational experience (Johanson and Vahlne 1977).

Johanson and Mattsson (1988) proposed a network perspective to the gradualist model. Their explanation was that the internationalization of organizations cannot be studied in isolation and must be analyzed using its environment of networks. This was partially helpful in explaining the rapid and non-gradualist internationalization of SMEs as the unit of analysis was changed from an isolated firm to being a part of value chain, and the reliance on psychic distance and experience-based learning in explaining internationalization could be relaxed. Accordingly, contemporary market (against neo-classical market) is a network of relationships and the firms are linked in complex and invisible patterns in this network (Johanson and Vahlne 1990, 2010). “Insidership” in this network is a necessary condition for internationalization.

Looking at traditional international theories such as the Uppsala model and the network perspective, the assumption is that firms with a limited or no knowledge of

foreign markets face a major constraint for international entry and diversification (Johanson and Vahlne 1977). However, in today's world of information and communication technology such an assumption seems to be unrealistic in which market information and the opportunity to form networks at a low cost are abundant if an entrepreneur is proactively seeking them. The assumption that learning helps to overcome the limited knowledge of foreign markets is not unrealistic. A main disparity in thought is that Johanson and Vahlne (1977) put more weight on experimental learning whereas recent scholars have highlighted that deliberate organizational learning and pre-internationalization knowledge can increase internationalization opportunities (Zheng et al. 2012).

Some scholars argue that internationalization is associated and explainable by means of entrepreneurship theories (George and Zahra 2002; Lu and Beamish 2004; Oviatt and McDougall 1994). According to the international entrepreneurship viewpoint, the key to internationalization at the present time is the entrepreneur not experience-based learning or the presence of international networks. In a more dynamic international environment, entrepreneurship theory explains the internationalization phenomenon better than the gradualist theories.

Yet, Coviello (2015) commented that a better understanding of born globals can be achieved only through in-depth insights into the entrepreneur's logic and reasoning ability not just his or her entrepreneurial orientation. It is argued that entrepreneurial orientation is only one aspect of influence. International entrepreneurship ignores concepts such as psychic distance, market size and proximity, trade barriers, etc. (most of them are external factors), but recent research shows that they are still valid predictors of international expansion (Al-Aali and Teece 2013). For example, research has found that small countries in Europe expand quickly due to restricted market size to adjacent countries due to proximity and less psychic distance (Coviello 2015).

The results of Monteiro et al. (2017) show that export performance is directly impacted by dynamic capabilities and entrepreneurial orientation in emerging countries. Results of Zhou et al. (2016) indicated that both explorative and exploitative capabilities are positively related to new product development and export performance of Chinese MNEs. The results of Takahashi et al. (2016) indicated that dynamic capabilities have an influence on international performance only when mediated by marketing ability.

The emergent of dynamic capabilities concept is grounded largely on the evolutionary theory of the firm (Winter and Nelson 1982), which implies that managers cannot and should not look for optimal final solutions or routines for operations, but they should continually reconfigure firm resources, routines, and capabilities to match the dynamic business environment (Zahra et al. 2006). Teece et al. (1997) argued that organizations rely on dynamic capabilities to build competitive advantage in regimes of rapid change. The dynamic capability theory posits that, because contemporary marketplaces are dynamic, more than the simple heterogeneity in firm resources, it is the capabilities by which firm resources are acquired and deployed in ways that match a firm's market environment that explain inter-firm performance variance (Teece et al. 1997). This concept was defined by Teece et al. (1997) as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (p. 516).

Theoretical Framework and Hypotheses

Organizational Dynamic Capabilities and Internationalization

Dynamic capabilities can be regarded as the ability of the organization to sense, learn, and transform in line with fast-changing external environments (Teece 2007). Research carried out so far linking dynamic capabilities and internationalization has contributed to the robustness of the theory of dynamic capabilities (Peng and Lin 2017). This theory highlights the importance of possessing change capabilities to tackle rapid environmental changes in an international business context. The organizations need to develop processes for sensing the international environment and to learn from the experience. The readiness of an organization to transform its attitudes, processes, and resources is a key factor of internationalization success.

The most important objective of contemporary internationalization studies should be to look at the factors that enable firms not only to internationalize but also to build an organization capable of withstanding internationalization advantage in the long term (Al-Aali and Teece 2013). Schweizer et al. (2010) endorsed the notion that the dynamic capabilities perspective is relevant to explain internationalization. They state that the dynamic capability perspective adds a new dimension to the internationalization literature and can enhance existing internationalization theories. The knowledge gleaned from prior international experience can also become outdated and less relevant in a fast-paced world of change. For this reason, the current or on-going networks to which a venture is internationally exposed are important as international experience. Hence, the inference can be made that the density and quality of current networks support the development of organizational dynamic capabilities required for internationalization (Bruneel et al. 2010). Weerawardena et al. (2007), in their seminal article, conjecture that the set of dynamic capabilities that are built and nurtured by internationally oriented entrepreneurial founders enable these firms to develop knowledge-intensive products, paving the way for their accelerated market entry.

When firms internationalize, they need to maintain both exploration and exploitation capabilities balanced (i.e., ambidexterity that is considered as a dynamic capability). Otherwise, a risk exists that the firms may build core rigidities (i.e., either spending too much time exploring the possibilities without learning from the experience to exploit opportunities or vice versa) (Prange and Verdier 2011). Exploitation more closely resembles gradualist models (the organizational learning perspective that fits well with Uppsala model of gradual market development), and exploration closely resembles the proactive, innovative, and risk-taking behavior of the international entrepreneurship model. So, to avoid developing core rigidity, an SME needs to have both characteristics. This leads to the direction of the possibility of the integration of multiple internationalization theories. Peng and Lin's (2017) evidence from an emerging context forms a solid foundation for Teece et al.'s (1997) and Eisenhardt and Martin's (2000) contention about the importance of dynamic capabilities (DCs) and contributes to international business literature by establishing SME DCs as a key determinant of superior export performance.

In past decade, DCs became an active research area with a multi-discipline approach to study the internationalization phenomenon (Barrales-Molina et al. 2013). But, per Falahat et al. (2015); Monteiro et al. (2017); and Prange and Verdier (2011), the current understanding of dynamic capabilities and their potential to explain internationalization is

incomplete and lacking. This research assesses the influence of organizational DCs on SME internationalization. The following hypothesis is supported by the theoretical and empirical literature on dynamic capabilities and internationalization (Jantunen et al. 2005; Swoboda and Olejnik 2016; Villar et al. 2013). In a dynamic business environment, it could be assumed that dynamic capabilities support the internationalization prospects.

- H₁—Organizational DCs influence SME internationalization

Multi-Level Approach to Dynamic Capabilities Theory

Dynamic capabilities can be found in multi-levels such as the individual level, the firm level, or the network level, and an interaction exists between these levels (Carlos and Pinho 2011; MacLean et al. 2015; Rothaermel and Hess 2007). When analyzing firm internationalization, researchers invoke constructs like resources and capabilities while ignoring individual-level heterogeneity. Concentrating on only one level of analysis implicitly assumes that most heterogeneity is located at the chosen level, and the other levels remain homogeneous. Yet, past research has verified the inextricable link between individual-level characteristics and corporate characteristics (Felicio et al. 2015; Fernandez-Mesa and Alegre 2015).

According to Fisher (2012), in highly dynamic markets such as international markets, target customers can only be vaguely defined, thus entrepreneurs' goals are becoming very volatile. In this scenario, the entrepreneurs shift their focus from setting and achieving organizational goals to maximizing their control of internal resources such as personal knowledge, skills, and social networks. This process sometimes creates new breakthroughs in all aspects and is called "effectuation" (Kalinic et al. 2014). This implies that entrepreneurs rely more on their implicit inner strengths than on rational goal setting and rational decision-making processes in international activities as opposed to large-scale companies. Hence, studying organizational capabilities, while ignoring the contributions of the entrepreneur in developing and sustaining these capabilities in the SME context, is unrealistic. This current research hypothesizes that individual-level dynamic capabilities play a predictive role in the development of organizational-level dynamic capabilities and internationalization.

Then, the key question that arises is which capabilities are more likely to resemble dynamic capabilities at the entrepreneur level?

Entrepreneurs create, define, discover, and exploit opportunities well ahead of their rivals. According to Zahra et al. (2006), entrepreneurial activities lead to the generation of dynamic capabilities. Hence, one such key individual level characteristic is entrepreneurial orientation (EO), which measures the extent of the entrepreneurial inclination of the owner/founder. Entrepreneurial orientation (EO) refers to the "processes, practices and decision-making activities that lead to new entry" (Lumpkin and Dess 1996, p. 140). EO facilitates recognition of business opportunities and implements necessary product, process, and organizational changes to seize opportunities without a time delay ahead of competitors as individuals with more EO take more risk.

The extant literature highlights the importance of networking (social capital) (SC) as a component of dynamic capabilities (Falahat et al. 2015; Kleinbaum and Stuart 2014; Monferrer et al. 2014; Pinho and Prange 2016). Social capital helps to get information, find international partners, reduce psychic distance, reduce the liability of foreignness, overcome

institutional inefficiencies, and obtain financing, all of which are required for change capacity. Hence, this research argues that extent of networks at individual entrepreneur level (the social capital of entrepreneur) is another key individual level dynamic capability.

According to Cohen and Levinthal (1990), a number of scholars have found that a firm's ability to recognize and acquire new information is dependent on its absorptive capacity, or the prior knowledge and experience of the team or firm. The discovery of new opportunities involves recognizing the value of new information, and those entrepreneurs with previous experience will capitalize on a new opportunity sooner than those who are required to search for such knowledge to assess the opportunity (Lecler and Kinghorn 2014). Experience may help to "connect the dots" due to well-developed cognitive prototypes of ideal opportunities (Baron and Ensley 2006). In this sense, the human capital of the entrepreneur (HC), mainly previous experience, can be considered a key individual-level dynamic capability.

Moreover, absorptive capacity supported by international experience helps to evaluate and utilize outside knowledge related to internationalization and innovation (Cohen and Levinthal 1990). As per Sun and Anderson (2010), absorptive capacity and organizational learning are related and integrated. Fang and Hung (2007) argue that organizational learning is amplified by SC because SC brings a multitude of learning sources while Li et al. (2012) argue that SC moderates the organizational learning and opportunity capture relationship. According to scholars, networks with other entrepreneurs or business partners contribute to indirect learning in organizations with the opportunity to study the behavior of the other similar organizations (Johanson and Vahlne 2003). Transformation capability is also amplified by SC and HC because they aid an entrepreneur in better assessing the environmental shifts and changes in a more accurate and timely manner. Hence, SC and HC clearly influence organizational learning and transformation dimensions of dynamic capabilities as well.

In this research EO, SC, and HC of the entrepreneur are considered as antecedents that support the development of organizational dynamic capabilities required to enter and consolidate a position in the international market. It is argued that these three variables have a complex interplay and synergic effect on the development of dynamic capabilities at the individual level, the generation of knowledge-seeking and absorption capabilities required for internationalization.

Against this background, a new formative variable is introduced taking into consideration the interaction between entrepreneur characteristics (i.e., EO, SC and HC), which is coined "Owner Specific Dynamic Capabilities (OSDC)".

EO, SC, and HC at the organizational level have been related to internationalization in past research (Falahat et al. 2015). From an individual-level perspective of the same variables, the following hypothesis can be formed for relationship between OSDCs and Organizational DC s.

- H₂—OSDCs positively influence Organizational DCs.

Linking Owner-Specific Dynamic Capabilities to the Internationalization Process

The relationships among EO, SC, and HC variables and internationalization have been supported by the international entrepreneurship theory (Oviatt and McDougall 1994)

and network theory (Johanson and Mattsson 1988) and the Uppsala model (Johanson and Vahlne 1977). However, testing EO, SC, or HC discretely as antecedents of internationalization has resulted in inconsistent results possibly because these variables interact with each other (Madsen 2007). These three variables play a synergic and complementary role in information sensing and absorption as argued in past literature.

EO had a positive relationship with internationalization according to the research of many scholars (e.g., Deligianni et al. 2015; Zhang et al. 2015; Javalgi and Todd 2011; DeClercq et al. 2005; Jantunen et al. 2005; Knight and Cavusgil 2004), but contradictory findings are also reported (Hosseini 2013; Zhang et al. 2012; Frishammar and Andersson 2008; Morgan and Strong 2003). Similarly, some research has found that social capital influences internationalization positively (e.g., Faroque et al. 2017; Milanov and Fernhaber 2014; Fernhaber and Li 2013; Ciravegna et al. 2013; Xiao et al. 2012; Che Senik et al. 2010) while other research has found the contrary (Musteen et al. 2014; Yli-Renko et al. 2001; Masciarelli 2011). Although some of these studies have measured EO and SC at different levels, these studies highlight the relevance of the two dimensions for internationalization process.

Several authors have explained how EO, SC, and HC interact. After an entrepreneur has observed new business opportunities such as a new international market opportunity, they must determine how to interpret new events and developments, which technologies to pursue and which market segments to target (e.g., the entry mode, scale of entry, etc.). Teece (2006) calls these dimensions of dynamic capabilities as sensing and seizing capabilities. At the individual level, opportunity-sensing character is portrayed in the entrepreneurial behavior of pro-activeness and the extent of networks that act as information channels (Lumpkin and Dess 1996). The ability to seize an opportunity is supported by risk-taking behavior, quality and quantity of networks, and the cognitive ability (human capital) of entrepreneur developed because of past international experience.

According to research by Colovic and Lamotte (2014), networks are more important for SMEs in internationalization as they have few resources, and networks also act as a substitute for less internationally experienced entrepreneurs. Networks allow organizations to link to diverse sources of information even in the conditions of a lack of a deliberate search and a lack of entrepreneurial orientation. So, it is clear that entrepreneurs with less experience and less EO may still be facilitated for internationalization through SC.

According to Evers (2011), the mental model that acts as an intermediating force between push and pull factors of internationalization is largely shaped by owner entrepreneurial orientation and experience. That explains why most entrepreneurs stated that they felt significantly low psychological risk after the first or second international market entry implying the importance of international exposure of managers prior to internationalization (Dow 2000). Denicolai et al. (2014) suggest that balancing knowledge assets with complementary assets is necessary to achieve a higher degree of international performance. In other words, if international experience is not supported by other assets such as relational assets or entrepreneurial behavior, then higher internationalization is unlikely.

Zhang et al. (2015) found that entrepreneurship behavior and network ties have a joint effect on the internationalization of Chinese firms. The extent of social capital has a moderating effect on the link between entrepreneurial orientation and internationalization implying that the value of EO diminishes without support of SC.

As per the research of Chandra, Styles, and Wilkinson (2006, p. 7), the prior knowledge and social networks of entrepreneurs act as a “knowledge corridor” allowing an entrepreneur to identify international business opportunities. Networks support the internationalization process by providing information (in a subtle way they also replenish poor prior knowledge), reducing perceived risks, and providing resources. Chandra et al. (2012) offer a counter argument to the traditional international entrepreneurship viewpoint stating that before the rapid internationalization process, a process of opportunity development exists, which is shaped by entrepreneur experience and networks. According to Kusumawardhani et al. (2009), EO is insufficient for entering international markets for SMEs in developing countries in which SMEs rely a great deal on networks.

Risk taking is defined as a willingness to commit significant resources to opportunities that have a “reasonable chance of failure”, which is a key dimension of EO (Lumpkin and Dess 1996, p.140). The question is what facilitates entrepreneurs in identifying ventures with a reasonable chance of failure? International entrepreneurship theory that focuses on entrepreneurial characteristics of the decision-maker does not imply that the decision to internationalize and subsequent performance are the result of uncalculated and uneducated risks taken by the decision-maker. The assumption is that cognitive knowledge possessed by the entrepreneur is a critical input for entrepreneurial activities (Thorpe et al. 2005). The actors in the entrepreneur network will also provide valuable input and feedback on entrepreneurial decisions and which risks are worthy of taking. The underlying principle is that EO will be less beneficial without the support of intense networks and HC.

Entrepreneurial opportunity and internationalization relationship is mediated by entrepreneur perceptions of the opportunity (Oviatt and McDougall 2005). Oviatt and McDougall also mention that entrepreneur perceptions of an opportunity and internationalization are moderated by two factors, namely, networks and knowledge, which resemble SC and HC aspects of this research and the ability of these variables to influence entrepreneur decisions in the internationalization process.

In addition to supporting the international opportunity identification process through knowledge-seeking behavior, SC and HC also support information absorption. Hsu et al. (2013b) argue that, because expanding into international business is a risky and complex task, decision-makers reduce cognitive effort using heuristics (heuristic, is an approach to problem solving that employs a practical method not guaranteed to be optimal, but sufficient for the immediate goals) to integrate pieces of information into a single judgment. This is largely influenced by past entrepreneur experience rather than by rational goal setting. Moreover, many influential characters exist in the informal and formal contacts of entrepreneur networks who will take different perspectives and different attitudes with respect to an international opportunity. It is reasonable to infer that these multiple perspectives would support knowledge absorption and interpretation process of the entrepreneur.

EO, SC, and HC as the second-order formative construct of OSDC have been linked to internationalization using three existing internationalization theories as underpinning theories.

The relationship between entrepreneur orientation and internationalization in the theoretical framework of this research relies on the well-established theory of international entrepreneurship. Recent research has used the theory of international

entrepreneurship to link entrepreneurial orientation to internationalization (Deligianni et al. 2015; Falahat et al. 2015; Swoboda and Olejnik 2016; Zhang et al. 2015).

The network perspective of internationalization argues that relationship quality and density (i.e., social capital) are the main mechanisms of internationalization both at the organizational and individual levels. The theoretical framework of this research utilizes the theory of networks to form the relationship between the social capital of an entrepreneur and internationalization. The results of Pham et al. (2017) carried out in emerging context (Vietnam) indicate that a firm's relational capability is the strongest predictor of export performance among different capabilities.

The Uppsala model of internationalization contributes to the literature by focusing on the experience-based learning mechanism in internationalization. The main focus of the theory was originally on organizational learning, but later, scholars have identified that the experience-based learning process can be related to internationalization at the individual level (Ciszewska-Mlinari 2003; Fernhaber and Li 2013; Javalgi and Todd 2011; Sheffrin 2003). The relationship between human capital (international experience of the entrepreneur) and internationalization in the theoretical model of this research is justified with the core argument of Uppsala model.

- H₃—OSDCs positively influence SME internationalization

Organizational Position and Dynamic Capabilities

Not only a firm's distinctive incumbent capabilities but their unique "positions" directly influence the development of dynamic capabilities. These positions include technological, complementary, market, reputational, institutional, and structural resource endowments (Teece et al. 1997). Lavie (2006) posits that the prevailing assets of the organization and how complex, causally ambiguous, embedded, and interdependent they are will guide the type of dynamic capabilities that a firm will deploy and the ultimate effectiveness of that deployment.

According to Teece et al. (1997), the product market position should be analyzed with respect to market dynamism. A strong market share is desired but in dynamic markets, this market share can vary significantly within a short time period. Hence, as per Teece et al. (1997), more than the market position, the dynamism of the market environment is important in developing dynamic capabilities. When the business environment of the firm is very dynamic as in an international market, firms naturally feel the need to change to maintain their market positions. Hence, they are propelled to develop DCs more than firms operating in more stable markets. Therefore, it can be hypothesized that the dynamism of the market acts as an antecedent of DCs. Market assets have been defined as the "dynamic heterogeneity that characterizes the organizational environment" (Protogerou et al. 2012, p. 624).

The formal and informal structure of organizations and their external linkages have an important bearing on the rate and direction of innovation, the ability to change and how other competences and capabilities co-evolve (Teece et al. 1997). Teece et al. (1997) used the term "structural assets" to identify the flexibility of an organization. Firms with strong dynamic capabilities exhibit technological and market agility. In order to develop this high agility, less hierarchy must be used (Teece 2014). As per

Teece et al. (1997), the responsiveness of an organization is important for achieving a long-term advantage as succinctly explained in his seminal article “winners in the international market will be the firms that can demonstrate timely responsiveness and rapid flexibility” (Teece et al. 1997, p.515). Organizational structure is classically defined as “the sum total of the ways in which it divides its labor into distinct tasks and then achieves coordination among them” (Mintzberg 1979, p.56).

When an organization possess a good reputation, stakeholders are more likely to view their new products/investments favorably (Sichtmann 2007). On the other hand, SMEs with a low or less well-known reputation will find it more difficult to obtain finance for expansion or changes, receive favorable credit terms from suppliers, and receive favorable shipping terms from importers and will not be accepted easily as trade partners by firms in other countries (Deelmann and Loos 2002). Furthermore, organizational changes of well-reputed organizations are more likely to be viewed in a favorable manner, and such organizations are not vulnerable to adverse publicity giving an advantage in capability of the organization to change to suit the environment. This implies that a higher reputation should lead to higher dynamic capabilities generation ability. Thus, corporate reputation also plays a key role in developing dynamic capabilities in the internationalization process because it supports and enhances new product introduction and recovery strategies in a crisis and when receiving funds from investment sources (Rindova et al. 2005). Thus, the following hypotheses are posited.

- H₄—The market assets position (environment dynamism) positively influences Organizational DCs.
- H₅—The structural assets position (organizational flexibility) positively influences Organizational DCs.
- H₆—The reputational assets position positively influences Organizational DCs.

The conceptual framework developed based on the above literature review and hypotheses are shown in Fig. 1.

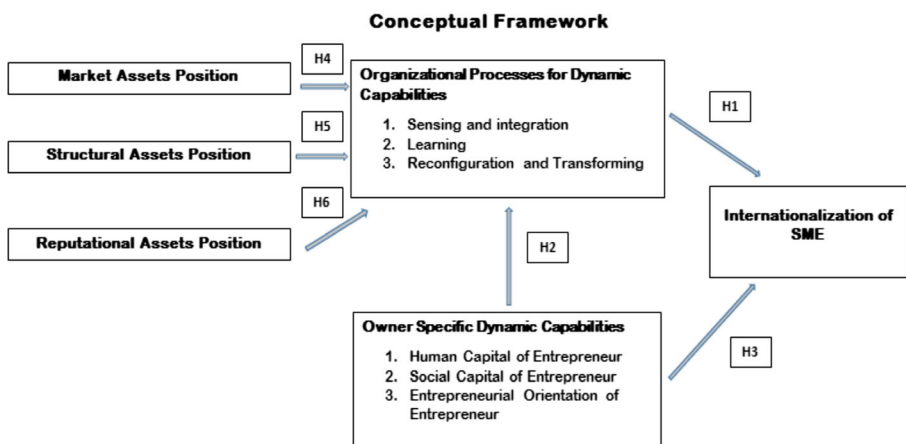


Fig. 1 Conceptual framework of the study

Methodology

Research design

This research design employed the survey method for data gathering. A structured non-disguised questionnaire was developed to test the conceptual framework. Three hundred firms were randomly selected from the export directory of 3027 business firms from the SME exporters category published by Export Development Board of Sri Lanka, which could be considered as the population of the study. SMEs were defined as those with less than 250 fulltime employees.

Questionnaires were sent by e-mail to randomly selected, potential respondents, and only 24 responses were collected after 3 months yielding an electronic mail response rate of 8%. Then, the researcher personally administered the questionnaire to SMEs and 173 responses were collected by distributing self-administered questionnaire in person to randomly selected SMEs as per the sampling strategy. The total number of responses collected using both methods was 197. The overall response rate was 65%. The respondent of the questionnaire was either the entrepreneur of the business or the owner at the time the business entered the international market. In cases in which the entrepreneur at the time business entered the international market and current owner were two individuals, the data were collected from the entrepreneur.

Measures

This research used scale developed by Bolton and Lane (2012) to measure individual EO. Most popular EO scales are targeted at measuring EO at the organizational level although they are adopted to be used at individual level. A scale that was specifically developed to measure individual EO would increase the validity of the research as the focus in this research is specifically on owner characteristics. This research focused on the social capital of the entrepreneur; thus, this research used a measurement scale that was recently developed and validated to evaluate individual level networks (Che Senik et al. 2010). A ratio scale was used to measure international experience following Ciszewska-Mlinari (2003).

A majority of the previous research adopting quantitative approaches to dynamic capabilities have used the operationalization of Teece et al. (1997) or Teece (2007). This research used three dimensions, namely, sensing, learning, and transforming. To measure sensing capability, this research adopted the scale developed by Lin and Wu (2013), which was developed based on work of Teece et al. (1997) and Eisenhardt and Martin (2000). This research used the scale developed by Flores et al. (2010) to measure organizational leaning. Only selected dimensions of learning scale were included in the questionnaire to avoid overlapping with sensing scale. This research used Lin and Wu (2013) to measure reconfiguration capability.

The unidimensional scale developed by Tan and Litschert (1994) was used to measure environmental dynamism in this research. It measures managers' perceptions of dynamism in the general and the specific environment. The structural assets position was measured using Covin and Slevin's (1988) measurement scale, which assesses the extent to which a firm is structured in an organic versus a mechanistic way, and corporate reputation was measured using the unidimensional three-item scale adopted from Keh and Xie (2009).

Internationalization is defined as the process of increasing involvement in international operations for the purpose of this research (Gibb 1993). This research

incorporates the multidimensional approach and measures internationalization using internationalization intensity (FSTS), the percentage of employees who spend significant time on international activities and international scope (Sullivan 1994; Sapienza et al. 2005). Following Sapienza et al. (2005), this research used three zones. Weights were assigned to each zone to represent the psychic distance, and the number of countries exported in each category was multiplied by weights to arrive at a weighted average score. Many past researchers have used similar combination of dimensions (e.g., Papadopoulos and Martín 2010; Thomas and Eden 2004).

Analysis and results

The data were first analyzed for outliers, and one only outlier case was identified and deleted. As per the suggestions of Armstrong and Overton (1977), this research compared early respondents to late respondents. Of the total 197 firms responding, the 24 firms answering by e-mail were considered as early respondents and the final 24 of the remaining 173 that were collected by hand were considered as late respondents. Non-response was not a major concern for key variables. Harman's one-factor test (Podsakoff et al. 2003) was used to identify common method bias, and maximum variance explained by a single factor was recorded as 38%. Because this research includes two modes of questionnaire administration (electronic mail and in-person), appropriate tests were employed to see if the mode of questionnaire administration had an effect on the validity of the results (Chang and Krosnick 2010).

The normality of the data was tested using Shapiro-Wilk's test of normality and skewness and kurtosis analysis for normal distribution (Hair et al. 2010). These tests showed that the data were not normal, but further analysis using histograms indicated that the non-normality was not a major deviation from normal distribution.

The majority of SMEs in the sample (49.7%) had a private limited ownership structure. The sample included SMEs from manufacturing, service, and trade categories. Of these, 70.6% of SMEs were from the manufacturing sector while 15.2% of the SMEs were from services category. Agriculture-based SMEs were included in manufacturing category in the analysis.

The average number of full-time employees in the SMEs of the sample was 81, and the average foreign sales to total sales (FSTS) was 71.5%. The maximum time taken to enter the international market was 35 years while 46% of the organizations were internationalized from their inception. The majority of these "born-global organizations" were from tea, rubber and textile industries, where the foreign markets are more lucrative with high profit margins and the products of these industries are having already established country-of-origin advantages. This data shows that export SMEs are well-established and have grown to organizations of substantial labor force compared with non-exporting SME profiles (Herath 2014).

As per the methodological literature on SEM, this research adopted a two-step model building approach (Hair et al. 2010; Schumacker and Lomax 2004). Step one involved exploratory factor analysis (EFA), where initially developed scales were refined as per a scale purification procedure that Churchill 1979 recommended, and then confirmatory factor analysis (CFA), for purified and validated scales, to validate the measures for the final model estimation using PLS-SEM.

Two measurement items were removed from the scales in EFA because one item loaded on a theoretically incorrect factor (EO7), and the other was removed due to cross-loading (SC3). (The [appendix](#) lists the acronyms used for variable items). Another seven items were removed during the CFA process due to low outer loadings. This study used a cut-off value of outer loading of 0.7, considering Henseler et al.'s (2009) suggestion. Table 1 refers to the removed items.

Table 1 Outer loadings of the measurement model

Factor	Item	Factor loading (outer loading)
EO	EO1	0.8464
	EO2	0.8265
	EO3	0.8107
	EO4	0.8470
	EO5	0.8516
	EO6	0.8419
	EO8	0.7663
	EO9	0.7279
	SC	SC1
SC2		0.2286 (dropped)
SC4		0.8637
SC5		0.9176
SC6		0.9111
SC7		-0.1694 (dropped)
ODC		ODC1
	ODC2	0.8159
	ODC3	0.7903
	ODC4	0.6026
	ODC5	0.8765
	ODC6	0.7824
	ODC7	0.8075
RA	RA1	0.9144
	RA2	0.9142
	RA3	0.9208
SA	SA1	-0.1925 (dropped)
	SA2	-0.1902 (dropped)
	SA3	0.8731
	SA4	0.8854
	SA5	0.9104
EDY	EDY1	0.1392 (dropped)
	EDY2	0.9564
	EDY3	0.9378
	EDY4	0.1291 (dropped)

An average variance extracted (AVE) value greater than 0.5 can be considered as a sufficient condition for convergent validity of the instrument (Bagozzi and Yi 1988; Fornell and Larcker 1981). Under the measurement model, internal consistency of measurement or reliability was assessed at two levels, namely, item reliability and composite reliability for all constructs (Fornell and Larcker 1981) where both reliability values must be greater than 0.7 for acceptable reliability (Nusair and Hua 2010). As seen from Table 2, all AVEs are above 0.5 for the constructs. Both reliability statistics are above 0.7.

The Fornell and Larcker (1981) criterion is the most common discriminant validity test in PLS-SEM analysis. All off-diagonal values were below square root of AVE value in the diagonal of correlation matrix indicating existence of discriminant validity as shown in Table 3.

Bootstrapping was carried out following the guidance presented in past literature (Ringle et al. 2005; Bagozzi and Yi 1988). Two hypotheses were rejected at the 95% confidence interval (i.e., H_5 and H_6). The two constructs of owner specific dynamic capabilities and organizational dynamic capabilities explained 58.9% of the variance in internationalization. Similarly, organizational position and owner-specific dynamic capabilities accounted for 44.9% of the variance in organizational dynamic capabilities. A summary of structural model testing is shown in Table 4.

The f^2 effect size measures the change in the R^2 value when a specified exogenous construct is ignored from the model. The f^2 effect size is used to evaluate whether the removed predictor construct has a substantive impact on the R^2 values of the endogenous construct. As per Cohen (1988), a value of 0.02 implies a small effect, a value of 0.15 implies a medium effect, and a value of 0.35 implies a large effect.

It can be observed from Table 5 that both ODC and OSDC have a substantial and equal influence in explaining internationalization. However, only OSDC and EDY have a considerable influence on R^2 of ODC construct. Further, as per Table 6, it can be confirmed that ODC mediates the relationship between OSDC and internationalization.

Discussion

Kalinic et al. (2014) and Fletcher and Andersson (2011) argued that internationalization research focused principally on organizational characteristics while neglecting the

Table 2 Cronbach's alpha, composite reliability, and communality

Variable	No. of items	AVE	Cronbach's alpha	Composite reliability	Communality
EO	8	0.6657	0.9278	0.9408	0.6657
SC	3	0.8066	0.8797	0.9259	0.8066
HC	1	1.0000	1.0000	1.0000	1.0000
ODC	7	0.6413	0.9047	0.9252	0.6413
EDY	2	0.9136	0.9055	0.9549	0.9136
SA	3	0.8348	0.9012	0.9381	0.8348
RA	3	0.8399	0.9048	0.9403	0.8399
INT	3	0.8024	0.8744	0.9238	0.8024

Table 3 Fornell and Larcker criterion for discriminant validity

	EDY	EO	HC	INT	ODC	RA	SA	SC
EDY	0.9558							
EO	0.5729	0.8159						
HC	-0.0385	-0.0670	1.0000					
INT	0.6629	0.5794	0.0304	0.8957				
ODC	0.5491	0.5635	0.0422	0.6885	0.8008			
RA	0.4905	0.6853	-0.0259	0.5335	0.4961	0.9164		
SA	0.2177	0.2402	0.0227	0.2120	0.2647	0.2641	0.9139	
SC	0.7165	0.5442	0.0025	0.7287	0.6027	0.4438	0.1902	0.8981

influence of the entrepreneur and his decision-making influence on the internationalization process. This research used a new construct named owner-specific dynamic capabilities, which was formed by EO, SC, and HC variables to explain internationalization and found a significant effect between owner-specific dynamic capabilities and internationalization. The three dimensions of this construct are tested earlier in abundance in internationalization literature, and, hence, the following discussion is on how these findings fit in with the previous findings.

The outcome of this study on the relationship between EO and internationalization confirms the expected theoretical explanation that internationalization is an act of entrepreneurship. Given the high risk of international business, the dynamism of the international environment (Dietmar et al. 2013), a lack of and difficulty in gathering market and industry information compared to localized SMEs (Kumar 2012), and frequent needs to change product offerings to suit country differences (Fletcher 2001), the inference can be made that risk-taking characteristics, innovative characteristics, and proactive characteristics of an entrepreneur are main factors that influence internationalization of SME. Yet, contradictory outcomes are also reported in the previous research (Zhang et al. 2015; Morgan and Strong 2003). This may be due to the fact that entrepreneurial behavior is time-dependent. Qualitative research evidence exists to prove that, although the founders of SMEs exhibit a high level of entrepreneurial orientation at the start of exporting, with time and experience, their EO diminishes and founding entrepreneurs tend to take low risk and be less proactive and innovative (Hanell et al. 2014). Also, EO may take many years to come to realization through improved internationalization.

Table 4 Summary of structural model testing

Hypothesis	Path	Path coefficient	Standard error	<i>t</i> statistics	Significance
1	ODC > INT	0.4058	0.0541	7.507	Significant
2	OSDC > INT	0.4398	0.0567	7.763	Significant
3	OSDC > ODC	0.4300	0.0964	4.460	Significant
4	EDY > ODC	0.1909	0.0738	2.585	Significant
5	SA > ODC	0.0929	0.0581	1.600	Not significant
6	RA > ODC	0.0854	0.0787	1.084	Not significant

Table 5 Calculation of effect size

Path	R ² included	R ² excluded	f ²	Effect size
F(ODC-INT)	0.589	0.487	0.24	Medium to large (0.15–0.35)
F(OSDC-INT)	0.589	0.483	0.25	Medium to large (0.15–0.35)
F(OSDC-ODC)	0.449	0.383	0.119	Small to medium (0.02–0.15)
F(RA-ODC)	0.449	0.445	0.007	Small (< 0.02)
F(SA-ODC)	0.449	0.441	0.014	Small (< 0.02)
F(EDY-ODC)	0.449	0.431	0.03	Small to medium (0.02–0.15)

International networks are essential to overcome resource scarcity and generation of capabilities (Carlos and Pinho 2011). Networks also act as sources of information and learning, substitute for lack of human capital (Colovic and Lamotte 2014), and lead to increased access to finance and avoid institutional voids (Shane and Cable 2002) among others, which are critical in the internationalization process. This research is in compliance with the voluminous literature, which has proven that a significant and positive relationship existed between social capital and internationalization. Contrary results could be explained by expounding on the negative role of excessive social ties. Having social ties concentrated in few countries can bring about rigidity to a firm inhibiting further international diversification, which is known as “over-embeddedness” (Balboni et al. 2014).

Little quantitative research exists on dynamic capabilities and internationalization to do a direct comparison because the majority of previous studies are either case studies or qualitative studies. The outcome of this research expands and agrees with the limited research carried out on the same relationship (Villar et al. 2013; Jantunen et al. 2005).

Environment dynamism or turbulence is commonly studied in relationship to internationalization and dynamic capabilities. Because forecasting accuracy diminishes with high environmental turbulence, firms need to develop adaptive approaches based on strategic flexibility through sensing, learning, and reconfiguration capabilities (Vecchiato 2015). When the environment turbulence is high, the value of dynamic capabilities to an organization also increase (Wang and Ahmed 2007). This research validates the above theoretical underpinnings as it confirmed that environment dynamism positively influences the development of dynamic capabilities (Wilden and Gudergan 2014; Frank et al. 2017).

With the increased recognition that international business is hyper-competitive and rapidly changing, Barreto (2010) suggests that research needs to identify how firms adopt their structure to fit into these conditions. Teece (2014) argued that, if dynamic capabilities are analogous to agility, then organizations must use less hierarchy and become flexible. Organizations must overcome resource rigidity as well as routine

Table 6 Mediation analysis using bootstrapping

Path	Path a	Path b	Indirect effect	SE	<i>t</i> value
OSDC > ODC > INT	0.637	0.694	0.442	0.047	9.4

rigidity to develop dynamic capabilities (Mei 2012). However, this research established that SME flexibility does not affect the generation of dynamic capabilities. Volberda (1997) contends that start-ups gradually move from a structure of chaotic form, which is a flexible, but disorganized form, lacking planning and strategic direction with a large variance in direction to a flexible structure. Hence, the flexibility reported in an SME is more of a flexibility due to “smallness” rather than to a flexibility purposefully developed to fit the environment and strategy. Such chaotic form of flexibility is unlikely to develop dynamic capabilities which should be “purposefully developed to get competitive advantage” (Ambrosini et al. 2009, p. 20). Second, this research analyzed the structure using Covin and Slevin’s (1988) scale, which measures extent of formal control of operations and formal procedures. While such structural flexibilities are important in organizational flexibility, other flexibilities such as production flexibility, market flexibility, employment flexibility, and task flexibility may be equally vital for the agility of a firm (Kekre and Srinivasan 1990).

A well-developed product reputation helps to develop dynamic capabilities by becoming a VRN resource that positively reinforces stakeholders (Olavarrieta and Friedmann 1999). However, in contrast to the expected positive relationship between reputation and dynamic capabilities, this research yields no significant relationship. One possible explanation is that the reputation of many traditional industry products is clustered around the origin of country or industry clusters. Many SMEs tend to rely on this reputation rather than developing a reputation of uniqueness of their own.

Turning to the results of the mediation test of the research, extant research has criticized research as being focused on a single level of analysis while ignoring other levels, which opens the door for spurious findings (Felin et al. 2012). Such a single-level approach is more likely to create a misinterpretation in an SME context given that individual entrepreneur characteristics can be a major influence on a firm. The results of this present research conclude that ODC acts as a mediator between OSDC and internationalization. This implies that organizational-level characteristics of SMEs are developed as a result of complex interactions between owner and organization.

A number of studies have examined the differences in management style between large businesses and SMEs. These studies have shown that SMEs have a small management team who are strongly influenced by entrepreneur and entrepreneur’s personal idiosyncrasies. Past research indicates that organizational level characteristics of SMEs are developed as a result of complex interaction between organization and owner (Rothaermel and Hess 2007; Rousseau 1985). This research furthers this theoretical argument by validating that individual-level dynamic capabilities lead to organizational level dynamic capabilities.

In the context of research, most traditional exports such as tea, coconut, rubber, gem, and coir products are from mature industries and have a low growth rate. Also, unlike markets for born globals, these products have relatively low dynamic market characteristics. The qualitative differences are huge not only between these industries but also other attributes of their material circumstances. Most theoretical internationalization and dynamic capabilities literature are concerned with high-tech companies and relevant to what has become a huge wave of born globals who rapidly internationalize. In particular, Teece (2007) and Teece et al. (1997) provide theories that apply to these kinds of firms. Recently, Ahmed et al. (2017) conducted a qualitative multi-case research in Pakistan and determined that technology firms from developing countries adopt many strategies for

internationalization that are different from those adopted in developed countries. These firms also face a distinctive set of challenges different from those faced by firms internationalizing from developed countries. Past results indicate that international experience and social capital have a greater impact on export performance than does innovation capacity, showing that a possibility of overemphasizing the role of capabilities and innovation exists in the export performance of SMEs in a developing country context (Oura et al. 2016). The fact that H5 and H6 were rejected may be because the theory has less applicability in the context of this investigation. Further qualitative and quantitative research is required to determine the applicability of these theories in the developing country context, and the future research outcomes could lead to modified theories more applicable to mature industries and markets of developing country context. This also highlights an important limitation of the research, that is, its results are not directly applicable to a developed country context.

Implications and Recommendations

Internationalization of SMEs is considered an emerging puzzle, and a number of questions about internationalization remain unanswered (Swoboda and Olejnik 2016).

The purpose of this research was to understand how the dynamic capabilities at the individual and firm levels influence the SME-internationalization process in a developing country context. The results of this study attest to the fact that internationalization is supported by entrepreneurial initiatives associated with the exploitation of networks of the entrepreneur, which aligns with the main arguments of the international entrepreneurship and network perspective of internationalization (George and Zahra 2002; Johanson and Mattsson 1988). The results also support the fact that organization learning measured as a dimension of dynamic capabilities plays a major role in internationalization as an essential dynamic capability for internationalization. In this sense, this research can be considered as developing an outcome that concludes that gradualist models and non-gradualist models of internationalization are complementary rather than contending theories as previously presented in literature.

This research complements the research attempts by previous scholars in relating DC at multi levels to internationalization and empirically validates the argument that internationalization is predicted by organizational dynamic capabilities (Teece 2014). This research thereby contributes in its own way to bring the notion of dynamic capabilities from abstract and intractable (Danneels 2008) to a more operationalized level (Dietmar et al. 2013).

This research also found that environmental dynamism is an antecedent of organizational dynamic capabilities. The results suggest that SMEs need to use their sensing capacity to assess environmental dynamism and develop dynamic capabilities that are necessary to survive in this dynamic environment keeping in mind that dynamic capabilities are purposefully developed and costly to develop and retain unless the situation demands (Pisano 2015). This finding also consolidates the theoretical views of the school of thought that have linked the generation of dynamic capabilities to the environment (Wang and Ahmed 2007; Eisenhardt and Martin 2000; Teece et al. 1997).

As for the practical implications of this research, policy makers should support entrepreneurial cultures of SMEs through risk-sharing programs and R&D, Intellectual

Property Rights, and Joint Ventures. Policy-makers should restructure education systems and motivate continuous education that places more emphasis on entrepreneurship and cross-cultural knowledge. They can also prioritize assistance to those entrepreneurs with previous experience or encourage the inclusion of external experienced consultants or partners in a firm. Furthermore, government can support SME owners in developing dense foreign and local networks while designing programs to develop Entrepreneurial Orientation, Social Capital and Human Capital simultaneously rather than one at a time. Authorities must encourage adoption of standard management practices that instill dynamic capabilities in the organizations such as ISO, JIT, and cross-functional teams, among others.

As for SME managers, in line with much other past research, this model highlights the importance of their own roles in entering and expanding export markets because export success is contingent on the personal engagement of SME key manager (Dietmar et al. 2013). This research implies that an organization should create an organizational environment or culture of entrepreneurial orientation. Internationalization is about continuing to be entrepreneurial even after starting the business and after expanding internationally. The most common pitfall is that once a business is established and stable and becomes mature, small business owners tend to develop a managerial mindset that abandons the essence of entrepreneurial mindset (Hanell et al. 2014). If managers are aware of and expecting to face potential difficulties during their internationalization process, they can be prepared for when those difficulties occur, by aligning and leveraging their competencies and by obtaining essential external resources. SME managers also need to try to develop an international orientation and a dense international and domestic network to harvest the vast opportunities beyond national borders.

Limitations and Future Research

Major limitations of this study should be considered. Because the local definition has been adopted in this study, the study outcomes may not be directly comparable with similar studies that have adopted other definitions of SMEs. It has been stated that dynamic capabilities and internationalization of the firm may represent extra costs and management commitment over the short term and only provide return over time. Hence, longitudinal studies are preferred to elaborate both the process of developing dynamic capabilities and benefits in the long run (Borch and Madsen 2007). Because this study is cross-sectional research, the relationship tested in this study represents a static situation in time. Furthermore, it is believed that entrepreneur-specific variables such as entrepreneurial orientation and social capital may have cogent implications on internationalization in the long term, but because this is not a longitudinal study, it is not possible to evaluate such an effect with great precision (Madsen 2007).

Furthermore, the data collected were self-reported about certain attitudes from one individual respondent in each firm. Such claimed subjective attitudes may not be obvious indicators of actual capabilities.

Future researchers can expand the model to include more dimensions for organizational position, internationalization, and human capital. Also, future researchers can use different operationalization definitions available and scales to measure dynamic capabilities. Future researchers are encouraged to compare and contrast the research model

across industry contexts, large and small organizations and countries. The causation path of this model is still in argument in literature as some researchers have mentioned that environment dynamism moderates the relationship between dynamic capabilities and internationalization. Finally, future research should look for other possible antecedents of internationalization to expand the explanatory power of the model.

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Appendix. Measurement Items

Part 1—Firm Information Collected from Respondents

1. What is your current position in the organization?
2. What year was your organization legally established in?
3. What year did your organization register for exports in Export Development Board (EDB)?
4. What is the province that your business is registered?
5. What is the ownership status of your business?
 - Sole proprietorship
 - Partnership
 - Private limited company
 - Public limited company
6. How many full-time employees are currently working in your organization?
7. Which one of the following nature of operation best represents your firm?
 - Manufacturing (including agro-based and manufacturing related services)\
 - Retail/wholesale
 - Service provider
8. What was the ***total sales income*** of this organization in the past year (2014)?
9. What was the ***income from exports*** in the past year (2014)?
10. State the number of countries that you export in the box from the following list.
 - South Asian countries□
 - Asian countries excluding South Asian countries.....□
 - Outside Asian continent□
11. According to your observation, what is the percentage of employees who spend significant time (more than 50% of their time) in activities relevant to international markets:%

Part 2

The following questions in Likert scale were designed to determine the characteristics of the owner/manager of the organization that influence internationalization process of the organization.

1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree

Entrepreneurial orientation of the owner/manager

Risk-taking characteristics

EO1—I like to take bold actions by venturing into the unknown.

EO2—I am willing to invest substantial time and funds on something that might provide high return.

EO 3—I tend to act confidently in situations where risk is involved.

Innovativeness

EO 4—I often like to try new and unusual activities that are not necessarily risky.

EO 5—I prefer a unique approach to carry out projects than revisiting tried and true approaches used before.

EO 6—I prefer to try my own unique way when learning new things rather than doing it like everyone else does.

EO 7—I favor experimentation and new approaches to problem solving.

Pro-activeness

EO 8—I usually act in anticipation of future problems, needs or changes.

EO 9—I tend to plan ahead in business and projects.

Social capital of the owner/manger

Institutional networks

SC 1—I have a high extent of organized network with banks and other financial institutions.

SC 2—I have a high extent of organized network with business support service providers.

SC 3—I have membership in different business associations or clusters.

Business associates

SC 4—I have high extent of organized networks with entrepreneurs in the same or similar industries.

SC 5—I have high extent of organized networks with suppliers.

SC 6—I have a high extent of organized networks with permanent corporate customers personal networks.

SC 7—I have a high extent of emotional support of the family members and other close relatives.

Human capital of the owner

International experience

Do you possess any international experience prior to starting international activities of this firm either by working abroad, foreign education or selling to international customers? (If yes, please indicate the time period in months)

Part 3

Questions in this part relates to characteristics of the organization. The following questions are designed to determine the organizational characteristics that influence internationalization process of the organization.

Organizational dynamic capabilities

Sensing

ODC 1—We have processes to collect information about changes in customer needs and potential market opportunities.

ODC 2—We have specialized mechanisms to collect industry information for managerial decisions.

Learning

ODC—Our employees from different areas share experiences and/or knowledge.

ODC 4—Our employees meet regularly to resolve issues and concerns.

Transformation and reconfiguration

ODC 5—We can develop a clear human resource re-allocation procedure in response to a change in the business environment quickly.

ODC 6—We can rapidly response to market changes.

ODC 7—We can rapidly response to competitor’s actions.

Organizational resource position

Corporate reputation

RA 1—This organization is a highly regarded company in the industry.

RA 2—This organization is a successful company.

RA 3—This organization is a well-established company.

Organizational structure: The operating management principle of my organization is

SA 1—Tight formal control of most operations by means of sophisticated control and information systems

SA 2—Strong emphasis on always getting personnel to follow the formally laid down procedures

SA 3—Strong emphasis on holding fast to true and tried management principles despite any changes in business environment

SA 4—Strong insistence on a uniform managerial style throughout the business units

SA 5—Strong emphasis on getting line and staff personnel to adhere closely to formal job descriptions

Business environment

EDY 1—The legal, technological, economic, etc. demands imposed on the organization by its environment are changing constantly.

EDY 2—The main agents in our organization’s environment (government, providers, customers, etc.) change their demands unpredictably.

EDY 3—Our organization’s environment requires managers to react rapidly to the changes that occur.

EDY 4—Normally, managers in our organization have advance knowledge of the changes that will occur in the environment.

References

- Ahmed J, Charles-Clemens R, Veronique F (2017) Internationalization strategies of born Globals from developing countries: evidence from Pakistan. *Academy of Management Annual Meeting Proceedings* 2017 1(1). <https://doi.org/10.5465/ambpp.2017.15420abstract>
- Al-Aali A, Teece DJ (2013) International entrepreneurship and the theory of the (long-lived) international firm: a capabilities perspective. *Enterp Theory Pract* 38(1):95–116. <https://doi.org/10.1111/etap.12077>
- Ambrosini V, Bowman C, Collier N (2009) Dynamic capabilities: An exploration of how firms renew their resource base. *Br J Manag* 20(1):1–41

- Amoros J, Bosma N (2014) Global entrepreneurship monitor—2013 global report—fifteen years of assessing entrepreneurship across the globe, Global entrepreneurship research association. Croom-Helm, New York, p 287–314
- Andersson S, Evers N, Kuivalainen O (2014) International new ventures: rapid internationalization across different industry contexts. *Eur Bus Rev* 26(5):390–405. <https://doi.org/10.1108/EBR-05-2014-0040>
- Armstrong J, Overton T (1977) Estimating nonresponse bias in mail surveys. *J Mark Res* 14(3):396–402
- Bagozzi RP, Yi Y (1988) On the evaluation of structural equation models. *J Acad Mark Sci* 16(1):74–94
- Balboni B, Bortoluzzi G, Vianelli D (2014) The impact of relational capabilities on the internationalization process of industrial subcontractors. *Transform Bus Econ* 13(2):21–40
- Banalieva ER, Sarathy R (2011) A contingency theory of internationalization. *Manag Int Rev* 51(5):593–634. <https://doi.org/10.1007/s11575-011-0093-0>
- Baron RA, Ensley MD (2006) Opportunity recognition as the detection of meaningful patterns: evidence from comparisons of novice and experienced entrepreneurs. *Manag Sci* 52(9):1331–1344
- Barrales-Molina V, Bustinza ÓF, Gutiérrez-Gutiérrez LJ (2013) Explaining the causes and effects of dynamic capabilities generation: a multiple-indicator multiple-cause modelling approach. *Br J Manag* 24(4):571–591
- Barreto I (2010) Dynamic capabilities: a review of past research and an agenda for the future. *J Manag* 36(1):256–280
- Bolton DL, Lane MD (2012) Individual entrepreneurial orientation: development of a measurement instrument. *Educ Train* 54(3):219–233. <https://doi.org/10.1108/00400911211210314>
- Borch OJ, Madsen EL (2007) Dynamic capabilities facilitating innovative strategies in SMEs. *International Journal of Techno-entrepreneurship* 1(1):109
- Bruneel J, Yli-teno H, Clarysse B (2010) Learning from experience and learning from others: how congenial and interorganizational learning substitute for experiential learning in young firm internationalization. *Strateg Entrep J* 4(3):164–182
- Carlos J, Pinho MR (2011) Social capital and dynamic capabilities in international performance of SMEs. *J Strateg Manag* 4(4):404–421
- Cavusgil ST, Knight G (2015) The born-global firm: an entrepreneurial and capabilities perspective on early and rapid internationalization. *J Int Bus Stud* 46(1):3–16
- Chandra Y, Styles C, Wilkinson I (2006) The discovery of international entrepreneurial opportunities: a perspective from knowledge-based industries. *Int Mark Rev* 23(4):157–168
- Chandra Y, Styles C, Wilkinson I (2012) An opportunity-based view of rapid internationalization. *J Int Mark* 20(1):74–102
- Chang L, Krosnick JA (2010) Comparing oral interviewing with self-administered computerized questionnaires: an experiment. *Public Opin Q* 74(1):154–167. <https://doi.org/10.1093/poq/nfp090>
- Che Senik Z, Isa R, Scott-Ladd B, Entrekun L (2010) Influential factors for SME internationalization: evidence from Malaysia. *Int J Econ Manag* 4(2):285–304
- Churchill G (1979) Paradigm for developing better measures of marketing constructs. *J Mark Res* 16(1):64
- Ciravegna L, Lopez L, Kundu S (2013) Country of origin and network effects on internationalization: a comparative study of SMEs from an emerging and developed economy. *J Bus Res* 20(1):916–923. <https://doi.org/10.1016/j.jbusres.2013.07.011>
- Ciszewska-Mlinari M (2003) Small firms in a small country: managerial factors, internationalization and performance of Slovenian SMEs. *Manag Glob Trans* 8(3):239–259
- Cohen J (1988) *Statistical power analysis for the behavioral sciences*, 2nd edn. Lawrence Erlbaum, Mahwah
- Cohen W, Levinthal D (1990) Absorptive capacity: a new perspective on learning and innovation. *Adm Sci Q* 35(1):128–152
- Colovic A, Lamotte O (2014) The role of formal industry clusters in the internationalization of new ventures. *Eur Bus Rev* 26(5):449–470. <https://doi.org/10.1108/EBR-02-2013-0027>
- Committee for Economic and Commercial Cooperation [COMCEC] (2013) Promoting the SME exports in the OIC member countries. <http://www2.comcec.org/UserFiles/File/WorkingGroups/Trade/1-Trade-Report.pdf>. Accessed 9 February 2017
- Coviello N (2015) Re-thinking research on born globals. *J Int Bus Stud* 46(1):17–26
- Coviello N, McDougall P, Oviatt B (2011) The emergence, advance and future of international entrepreneurship research: an introduction to the special forum. *J Bus Ventur* 26(6):625–631. <https://doi.org/10.1016/j.jbusvent.2011.07.002>
- Covin JG, Slevin DP (1988) The influence of organization structure on the utility of an entrepreneurial top management style. *J Manag Stud* 25:217–234
- Danneels E (2008) Organizational antecedents of second-order competences. *Strateg Manag J* 29(5):519–543

- Dasanayaka S, Sardana G (2011) Small and medium scale enterprises in informal sector in Pakistan and Sri Lanka: a research agenda. *Eur Asia J Manag* 38(2):85–102
- DeClercq D, De Sapienza H, Crijns H (2005) Internationalization of SMEs: the role of organizational learning effort and entrepreneurial orientation. *Small Bus Econ* 24:1–28
- Deelmann T, Loos P (2002) Trust economy: aspects of reputation and trust building for SMEs in e-business. *Proceedings of Eighth Americas Conference on Information Systems*, 2213–2221
- Deligianni I, Dimitratos P, Petrou A, Aharoni Y (2015) Entrepreneurial orientation and international performance: the moderating effect of decision-making rationality. *J Small Bus Manag* 54(2):462–480. <https://doi.org/10.1111/jsbm.12152>
- Denicolai S, Zucchella A, Strange R (2014) Knowledge assets and firm international performance. *Int Bus Rev* 23(1):55–62
- Dietmar S, Jaeger S, Staubmann C (2013) Dynamic capabilities of resource-poor exporters: a study of SMEs in New Zealand. *Small Enterp Res* 20(1):2–20. <https://doi.org/10.5172/ser.2013.20.1.2>
- Dow D (2000) A note on psychological distance and export market selection. *J Int Mark* 8(1):51–64. <https://doi.org/10.1509/jimk.8.1.51.19563>
- Dunning JH (1988) Paradigm of international the eclectic production: a restatement and some possible extensions. *J Int Bus Stud* 19(1):1–31
- Eisenhardt KM, Martin JA (2000) Dynamic capabilities: what are they? *Strateg Manag J* 21(11):1105–1121
- Etemed H (2004) Internationalization of small and medium-sized enterprises: a grounded theoretical framework and an overview. *Can J Adm Sci* 21(1):1–21
- Evers N (2011) Why do new ventures internationalize? A review of the literature of factors that influence new venture internationalization. *Ir J Manag* 5:17–47
- Falahat M, Migin MW, Chuan CS, Kong PF (2015) Conceptualising the early and rapid internationalising firms. *Procedia Soc Behav Sci* 211:612–618. <https://doi.org/10.1016/j.sbspro.2015.11.080>
- Fang SC, Hung RY (2007) Social capital, organizational learning capability, and technological knowledge transfer. Paper presented at the Academy of Human Resource Development International Research Conference in the Americas, Panama City, FL
- Faroque AR, Morrish C, Ferdous AS (2017) Networking, business process innovativeness and export performance: the case of South Asian low-tech industry. *J Bus Ind Mark* 32(6):864–875. <https://doi.org/10.1108/JBIM-06-2015-0113>
- Felicio A, Caldeirinha V, Ribeiro-Navarrete B (2015) Corporate and individual global mind-set and internationalization of European SMEs. *J Bus Res* 68(4):797–802
- Felin T, Foss NJ, Heimeriks KH, Madsen TL (2012) Microfoundations of routines and capabilities: individuals, processes, and structure. *J Manag Stud* 49(8):1351–1374
- Fernandez-Mesa A, Alegre J (2015) Entrepreneurial orientation and export intensity: examining the interplay of organizational learning and innovation. *Int Bus Rev* 24(1):148–156
- Fernhaber SA, Li D (2013) International exposure through network relationships: implications for new venture internationalization. *J Bus Ventur* 28(2):316–334. <https://doi.org/10.1016/j.jbusvent.2012.05.002>
- Fisher G (2012) Effectuation, causation, and bricolage: a behavioral comparison of emerging theories in entrepreneurship research. *Enterp Theory Pract* 36(5):1019–1051. <https://doi.org/10.1111/j.1540-6520.2012.00537.x>
- Fletcher R (2001) A holistic approach to internationalization. *Int Bus Rev* 10:25–49
- Fletcher M, Andersson S (2011) International entrepreneurship, born globals and the theory of effectuation. *Journal of Small Business and Enterprise Development* 18(3):627–643
- Flores LG, Zheng W, Rau D, Thomas CH (2010) Organizational learning: sub-process identification, construct validation, and an empirical test of cultural antecedents. *J Manag* 38(2):640–667. <https://doi.org/10.1177/0149206310384631>
- Fornell C, Larcker DF (1981) Evaluating structural equation models with unobservable variables and measurement error. *J Mark Res* 18:39–50 [Online] Available: <http://www.jstor.org/stable/3151312>
- Frank H, Guttel W, Kessler A (2017) Environmental dynamism, hostility, and dynamic capabilities in medium-sized enterprises. *Int J Entrep Innov* 18(3):185–194
- Frishammar J, Andersson S (2008) The overestimated role of strategic orientations for international performance in smaller firms. *J Int Entrep* 7(1):57–77. <https://doi.org/10.1007/s10843-008-0031-9>
- George G, Zahra SA (2002) International entrepreneurship: the current status of the field and future research agenda. *J Int Entrep* <http://www2.ufersa.edu.br/portal/view/uploads/setores/65/Zahra%20e%20George,%202002.pdf>. Accessed 9 February 2018
- Gibb AA (1993) Enterprise culture and education: understanding enterprise education and its links with small business entrepreneurship and wider educational goals. *Int Small Bus J* 11(3):11–34

- Hair JF, Black JW, Babin BJ, Anderson ER (2010) *Multivariate data analysis*, 7th edn. Pearson Education Limited, Edinburgh
- Hanell S, Nordman E, Sharma D (2014) The continued internationalisation of an international new venture. *Eur Bus Rev* 26(5):471–490
- Hennart J (2012) Emerging market multinationals and the theory of the multinational enterprise. *Glob Strateg J* 2(3):168–187
- Henseler J, Ringle CM, Sinkovics RR (2009) The use of partial least squares path modeling in international marketing. *Adv Int Mark* 20(4):277–320
- Herath MA (2014) Strategic orientation based research model of SME performance for developing countries. *Rev Integr Bus Econ Res* 2(1):430–440
- Hosseini M (2013) Firm level entrepreneurship and the internationalization of small and medium sized enterprises. Dissertation, Linköpings University
- Hsu C, Lien Y, Chen H (2013a) International ambidexterity and firm performance in small emerging economies. *J World Bus* 48:58–67
- Hsu W, Chen H, Cheng C (2013b) Internationalization and firm performance of SMEs: the moderating effects of CEO attributes. *J World Bus* 48(1):1–12. <https://doi.org/10.1016/j.jwb.2012.06.001>
- Jantunen A, Puumalainen K, Saarenketo S, Kyläheiko K (2005) Entrepreneurial orientation, dynamic capabilities and international performance. *J Int Entrep* 3(3):223–243. <https://doi.org/10.1007/s10843-005-1133-2>
- Javalgi RG, Todd PR (2011) Entrepreneurial orientation, management commitment, and human capital: the internationalization of SMEs in India. *J Bus Res* 64(9):1004–1010. <https://doi.org/10.1016/j.jbusres.2010.11.024>
- Johanson J, Mattsson LG (1988) Internationalization in industrial systems—a network approach. In: *Strategies in Global Competition*. Croom-Helm, New York, p 287–314
- Johanson J, Vahlne E (1977) The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *J Int Bus Stud* 8(1):23–32
- Johanson J, Vahlne E (1990) The mechanism of internationalization. *Int Mark Rev* 7(4):11–24
- Johanson J, Vahlne E (2003) Business relationship learning and commitment in the internationalization process. *J Int Entrep* 1:83–102
- Johanson J, Vahlne E (2010) Markets as networks: implications for strategy-making. *J Acad Mark Sci* 39(4):484–491
- Kalinic I, Forza C (2012) Rapid internationalization of traditional SMEs: between gradualist models and born globals. *Int Bus Rev* 21(4):694–707. <https://doi.org/10.1016/j.ibusrev.2011.08.002>
- Kalinic I, Sarasvathy SD, Forza C (2014) Expect the unexpected: implications of effectual logic on the internationalization process. *Int Bus Rev* 23(3):635–647. <https://doi.org/10.1016/j.ibusrev.2013.11.004>
- Kazlauskaitė R, Autio E, Gelbūda M, Šarapovas T (2015) The resource-based view and SME internationalization: an emerging economy perspective. *Entrep Bus Econ Rev* 3(2):53–64. <https://doi.org/10.15678/EBER.2015.030205>
- Keh HT, Xie Y (2009) Corporate reputation and customer behavioral intentions: the roles of trust, identification and commitment. *Ind Mark Manag* 38(7):732–742. <https://doi.org/10.1016/j.indmarman.2008.02.005>
- Kekre S, Srinivasan K (1990) Broader product line: a necessity to achieve success? *Manag Sci* 36(10):1216–1231
- Ketkar S, Acs Z (2013) Where angels fear to tread: internationalization of emerging country SMEs. *J Int Entrep* 11:201–219
- Kleinbaum AM, Stuart TE (2014) Network responsiveness: the social structural microfoundations of dynamic capabilities. *Acad Manag Perspect* 28(4):353–367. <https://doi.org/10.5465/amp.2013.0096> Accessed 9 February 2018
- Knight GA, Cavusgil ST (2004) Innovation, organizational capabilities, and the born-global firm. *J Int Bus Stud* 35(2):124–141. <https://doi.org/10.1057/palgrave.jibs.8400071>
- Korsakienė R, Tvaronavičienė M (2012) The internationalization of SMEs: an integrative approach. *J Bus Econ Manag* 13(2):294–307. <https://doi.org/10.3846/16111699.2011.620138>
- Kumar D (2012) Factors wavering internationalizations of SMEs: Indian context. *J Econ Behav Stud* 4(3):142–158
- Kusumawardhani A, McCarthy G, Perera N (2009) Framework of entrepreneurial orientation and networking: a study of SMEs performance in a developing country. *Proceedings of Australian and New Zealand Academy of Management Conference* 1–16
- Lanza A, Passarelli M (2014) Technology change and dynamic entrepreneurial capabilities. *J Small Bus Manag* 52(3):427–450

- Lavie D (2006) Capability reconfiguration: an analysis of incumbent responses to technological change. *Acad Manag Rev* 31:153–174
- Lecler CJ, Kinghorn J (2014) Dynamic capabilities, expert and entrepreneurial learning. *South Afr J Bus Manag* 45(2):65–82
- Lee H, Kelley D, Lee J, Lee S, Lee A (2012) SME survival: the impact of internationalization technology. *J Small Bus Manag* 50(1):1–19
- Li Y, Chen H, Liu Y, Peng M (2012) Managerial ties, organizational learning, and opportunity capture: a social capital perspective. *Asia Pac J Manag* 31(1):20–32. <https://doi.org/10.1007/s10490-012-9330-8>
- Lin Y, Wu LY (2013) Exploring the role of dynamic capabilities in firm performance under the resource-based view framework. *J Bus Res* 67(3):407–413. <https://doi.org/10.1016/j.jbusres.2012.12.019>
- Lisboa A, Skarneas D, Lages C (2013) Export market exploitation and exploration and performance. Linear, moderated, complementary and non-linear effects. *Int Mark Rev* 30(3):211–230
- Lu JW, Beamish P (2004) International diversification and firm performance: the S-curve hypothesis. *Acad Manag* 47(4):598–609
- Lumpkin GT, Dess G (1996) The entrepreneurial clarifying it construct and linking orientation. *Acad Manag Rev* 21(1):135–172
- Luo Y (2000) Dynamic capabilities in international expansion. *J World Bus* 35(4):355–378
- MacLean D, MacIntosh R, Seidl D (2015) Rethinking dynamic capabilities from a creative action perspective. *Strateg Organ* 13(4):340–352. <https://doi.org/10.1177/1476127015593274>
- Madsen EL (2007) The Significance of Sustained Entrepreneurial Orientation on Performance of Firms – a Longitudinal Analysis. *Entrep Region Dev* 19(1):185–204
- Mahzan N, Yan C (2014) Harnessing the benefits of corporate governance and internal audit: advice to SME. Proceedings of 5th Indonesia International Conference on Innovation, Entrepreneurship, and Small Business. Indonesia. <https://pdfs.semanticscholar.org/c847/0a5ecd4f6d7a9a82396a473cabb697fb8906.pdf>. Accessed 8 February 2018
- Masciarelli F (2011) The strategic value of social capital: how firms capitalize on social assets. Edward Elgar publishing, Cheltenham
- Mei MQ (2012) Customer orientation and organizational responsiveness. http://conference.druid.dk/acc_papers/de0brgxcfcfp727o9v63jic71sfn.pdf. Accessed on 8 February 2018
- Mejri K, Umemoto K (2010) Small- and medium-sized enterprise internationalization: towards the knowledge-based model. *J Int Entrep* 8(2):156–167. <https://doi.org/10.1007/s10843-010-0058-6>
- Mi TJ, Baharun R (2013) Introduction to SMEs in Malaysia: growth potential and branding strategy establishment of small medium sized enterprises in Malaysia. Proceedings of 3rd Asia-Pacific Business Research Conference 1–15. https://www.academia.edu/5681461/Introduction_to_SMEs_in_Malaysia_Growth_potential_and_branding_strategy. Accessed on 8 February 2018
- Milanov H, Fernhaber SA (2014) When do domestic alliances help ventures abroad? Direct and moderating effects from a learning perspective. *J Bus Ventur* 29(3):377–391
- Mintzberg H (1979) The structuring of organizations. Prentice-Hall, Englewood Cliffs
- Monferrer D, Blesa A, Ripollés M (2014) Born globals through knowledge-based dynamic capabilities and network market orientation. *Bus Res Q* 18(1):18–36
- Monteiro A, Soares A, Rua O (2017) Linking intangible resources and export performance: the role of entrepreneurial orientation and dynamic capabilities. *Balt J Manag* 12(3):329–347
- Morgan RE, Strong CA (2003) Business performance and dimensions of strategic orientation. *J Bus Res* 56(3):163–176
- Musteen M, Datta DK, Butts MM (2014) Do international networks and foreign market knowledge facilitate SME internationalization? Evidence from the Czech Republic. *Enterp Theory Pract* 38(4):749–774. <https://doi.org/10.1111/etap.12025>
- Nichter S, Goldmark L (2005) Understanding micro and small enterprise growth; USAID Micro Report, No. 36, November, Development Alternatives Inc., Washington. http://pdf.usaid.gov/pdf_docs/Pnady362.pdf. Accessed on 8 February 2018
- Nusair K, Hua N (2010) Comparative assessment of structural equation modeling and multiple regression research methodologies: E-commerce context. *Tour Manag* 31(3):314–324
- O’Cass A, Weerawardena J (2010) Examining the role of international entrepreneurship, innovation and international market performance in SME internationalisation. *Eur J Mark* 43(11/12):1325–1348. <https://doi.org/10.1108/03090560910989911>
- Olavarrieta S, Friedmann R (1999) Market-oriented culture, knowledge-related resources, reputational assets and superior performance: a conceptual framework. *J Strateg Mark* 7(4):215–228. <https://doi.org/10.1080/096525499346332>

- Organization for Economic Corporation and Development (2004) Promoting entrepreneurship and innovative SMEs in a global economy. Proceedings of 2nd OECD Conference of Ministers Responsible for Small and Medium-Sized Enterprises (SMEs). Turkey. <https://www.oecd.org/cfe/smes/31919590.pdf>. Accessed 8 February 2018
- Oura MM, Zilber SN, Lopes EL (2016) Innovation capacity, international experience and export performance of SMEs in Brazil. *Int Bus Rev* 25(4):921–932
- Oviatt BM, McDougall PP (1994) Toward a theory of international new ventures. *J Int Bus Stud* 25:45–64
- Oviatt BM, McDougall PP (2005) Defining international entrepreneurship and modeling the speed of internationalization. *Enterp Theory Pract* 29(April):537–553
- Pangerl S (2013) Obstacles to SME growth in Peru: an empirical analysis of the effect of labor constraints on firm performance. Dissertation. Georgetown University
- Papadopoulos N, Martín O (2010) Toward a model of the relationship between internationalization and export performance. *Int Bus Rev* 19(4):388–406. <https://doi.org/10.1016/j.ibusrev.2010.02.003>
- Peng P, Lin K (2017) The effect of global dynamic capabilities on internationalizing SMEs performance: organizational culture factors as antecedents. *Balt J Manag* 12(3):307–328
- Pham T, Monkhouse L, Barnes B (2017) The influence of relational capability and marketing capabilities on the export performance of emerging market firms. *Int Mark Rev* 34(5):606–628
- Pinho JC, Prange C (2016) The effect of social networks and dynamic internationalization capabilities on international performance. *J World Bus* 51(3):391–403
- Pisano GP (2015) A normative theory of dynamic capabilities: connecting strategy, know-how, and competition. HBS Working Paper 16–036. <https://hbswk.hbs.edu/item/a-normative-theory-of-dynamic-capabilities-connecting-strategy-know-how-and-competition>. Accessed on 8 February 2018
- Podsakoff PM, MacKenzie S, Lee J, Podsakoff N (2003) Common method biases in behavioral research: a critical review of the literature and recommended remedies. *J Appl Psychol* 88(5):879–903
- Prange C, Verdier S (2011) Dynamic capabilities, internationalization processes and performance. *J World Bus* 46(1):126–133. <https://doi.org/10.1016/j.jwb.2010.05.024>
- Protogerou A, Caloghirou Y, Lioukas S (2012) Dynamic capabilities and their indirect impact on firm performance. *Ind Corp Chang* 21(3):615–647. <https://doi.org/10.1093/icc/dtr049>
- Pundziene A, Teece D (2016) New applications of dynamic capability research. *Balt J Manag* 11(3). <https://doi.org/10.1108/BJM-05-2016-0103>
- Rahman M, Uddin M, Lodorfos G (2017) Barriers to enter in foreign markets: evidence from SMEs in emerging market. *Int Mark Rev* 34(1):68–86
- Rindova V, Williamson I, Petkova A, Sever J (2005) Being good or being known: an empirical examination of the dimensions, antecedents, and consequences of organizational reputation. *Acad Manag J* 48(6):1033–1050
- Ringle CM, Wende S, Will A (2005) SmartPLS 2.0 (beta)
- Ropega J (2011) The reasons and symptoms of failure in SME. *Int Adv Econ Res* 17(4):476–483. <https://doi.org/10.1007/s11294-011-9316-1>
- Rothaermel FT, Hess AM (2007) Building dynamic capabilities. *Organ Sci* 18(6):898–921
- Rousseau D (1985) Issues of level in organizational research: multilevel and cross-level perspectives. In: Cummings LL, Staw BM (eds) *Research in organizational behavior*, vol 7. JAI Press, Greenwich, pp 1–37
- Ruigrok W, Wagner H (2003) Internationalization and performance: an organizational learning perspective. *Manag Int Rev* 43:63–83
- Ruzzier M, Hisrich D, Antoncic B (2006) SME internationalization research: past, present, and future. *J Small Bus Enterprise Dev* 13(4):476–497. <https://doi.org/10.1108/14626000610705705>
- Sapienza HJ, De Clercq D, Sandberg WR (2005) Antecedents of international and domestic learning effort. *J Bus Ventur* 20(4):437–457. <https://doi.org/10.1016/j.jbusvent.2004.03.001>
- Schumacker RE, Lomax RG (2004) *A beginner's guide to structural equation modeling*. Lawrence Erlbaum, Mahwah
- Schweizer R, Vahlne E, Johanson J (2010) Internationalization as an entrepreneurial process. *J Int Entrep* 8(4): 343–370. <https://doi.org/10.1007/s10843-010-0064-8>
- Shane S, Cable D (2002) Network ties, reputation, and the financing of new ventures. *Manag Sci* 48:364–381
- Sheffrin SM (2003) *Economics: principles in action*. In: Pearson prentice hall. Upper Saddle River, New Jersey
- Sichtmann C (2007) An analysis of antecedents and consequences of trust in a corporate brand. *Eur J Mark* 41: 999–1015
- Slater SF, Narver JC (1995) Market orientation and the learning organization. *J Mark* 59:63–74
- Smallbone D, Welter F (2001) The role of government in SME development in transition countries. *Int Small Bus J* 19(4):63–77

- Sullivan D (1994) Measuring the degree of internationalization of a firm. *J Int Bus Stud* 25(2):325–342
- Sun T, Anderson M (2010) An examination of the relationship between absorptive capacity and organizational learning, and a proposed integration. *Int J Manag Rev* 12(2):130–150
- Swoboda B, Olejnik E (2016) Linking processes and dynamic capabilities of international SMEs: the mediating effect of international entrepreneurial orientation. *J Small Bus Manag* 54(1):139–161. <https://doi.org/10.1111/jsbm.12135>
- Takahashi A, Bulgacov S, Semprebon E, Giacomini M (2016) Dynamic capabilities, marketing capability and organizational performance. *Braz Bus Rev* 14(5):466
- Tallott M, Hilliard R (2016) Developing dynamic capabilities for learning and internationalization: a case study of diversification in an SME. *Balt J Manag* 11(3):328–347. <https://doi.org/10.1108/BJM-02-2015-0060>
- Tan J, Litschert R (1994) Environment–strategy relationship and its performance implications: an empirical study of the Chinese electronic industry. *Strateg Manag J* 15:1–20
- Tece D (2006) Reflections on the Hymer thesis and the multinational enterprise. *Int Bus Rev* 15(2):124–139. <https://doi.org/10.1016/j.ibusrev.2005.11.003>
- Tece D (2007) Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strateg Manag J* 28(13):1319–1350
- Tece D (2014) A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *J Int Bus Stud* 45(1):8–37
- Tece D, Pisano G, Shuen A (1997) Dynamic capabilities and strategic management. *Strateg Manag J* 18:509–533
- Thomas D, Eden L (2004) What is the shape of the multinationality–performance relationship? *Multinatl Bus Rev* 12(1):89–110
- Thorpe R, Holt R, Macpherson A, Pittaway L (2005) Using knowledge within small and medium-sized firms: a systematic review of the evidence. *Int J Manag Rev* 7(4):257–281. <https://doi.org/10.1111/j.1468-2370.2005.00116.x>
- Toulova M, Votoupalova M, Kubickova L (2015) Barriers of SME internationalization and strategy for success in foreign markets. *Int J Manag Case* 17(1):4–20
- United States International Trade Commission (2010) SME characteristics and performance, USITC Publication. <https://www.usitc.gov/publications/332/pub4189.pdf>. Accessed on 8 February 2018
- Vecchiato R (2015) Strategic planning and organizational flexibility in turbulent environments. *Foresight* 17(3):257–273. <https://doi.org/10.1108/FS-05-2014-0032>
- Villar C, Alegre J, Pla-Barber J (2013) Exploring the role of knowledge management practices on exports: a dynamic capabilities view. *Int Bus Rev* 23(1):38–44. <https://doi.org/10.1016/j.ibusrev.2013.08.008>
- Volberda HW (1997) Building flexible organizations for fast-moving markets. *Long Range Plan* 30(2):169–183. [https://doi.org/10.1016/S0024-6301\(96\)00110-0](https://doi.org/10.1016/S0024-6301(96)00110-0) Accessed on February 2018
- Wang CL, Ahmed PK (2007) Dynamic capabilities: a review and research agenda. *Int J Manag Rev* 9(1):31–51
- Weerawardena J, Mort G, Liesch P, Knight G (2007) Conceptualizing accelerated internationalization in the born global firm: a dynamic capabilities perspective. *J World Bus* 42(3):294–303
- Wilden R, Gudergan P (2014) The impact of dynamic capabilities on operational marketing and technological capabilities: investigating the role of environmental turbulence. *J Acad Mark Sci*:1–19. <https://doi.org/10.1007/s11747-014-0380-y>
- Winter G, Nelson R (1982) An evolutionary theory of economic change. Academy for Entrepreneurial Leadership Historical Research. University of Illinois
- World Trade Organization (2016) World Trade Report—leveling the trading field for SMEs, WTO publications. https://www.wto.org/english/res_e/booksp_e/world_trade_report16_e.pdf. Accessed on 8 February 2018
- Xiao Zhang, Xufei Ma, Yue Wang, (2012) Entrepreneurial orientation, social capital, and the internationalization of SMES: Evidence from China. *Thunderbird Int Bus Rev* 54 (2):195–210
- Xuemei Y (2011) Degree of internationalization and firm performance. Proceedings of 7th IEEE conference
- Yli-Renko H, Autio E, Sapienza H (2001) Social capital, knowledge acquisition, and knowledge exploitation in young technology based firms. *Strateg Manag J* 22:587–613
- Zahra S, Sapienza HJ, Davidsson P (2006) Entrepreneurship and dynamic capabilities: a review, model and research agenda. *J Manag Stud* 43(4):917–955
- Zhang X, Ma X, Wang Y, Li X, Huo D (2015) What drives the internationalization of Chinese SMEs? The joint effects of international entrepreneurship characteristics, network ties, and firm ownership. *Int Bus Rev* 25(2):510–522

- Zheng C, Khavul S, Crockett D (2012) Does it transfer? The effects of pre-internationalization experience on post-entry organizational learning in entrepreneurial Chinese firms. *J Int Entrep* 10(3):232–254. <https://doi.org/10.1007/s10843-012-0090-9>
- Zhou L, Wu A (2014) Earliness of internationalization and performance outcomes: exploring the moderating effects of venture age and international commitment. *J World Bus* 49:132–142
- Zhou Y, Lu L, Chang X (2016) Averting risk or embracing opportunity? Exploring the impact of ambidextrous capabilities on innovation of Chinese firms in internationalization. *Cross Cult Manag* 23(4):569–589

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