

## **Post-entry internationalization speed of SMEs: The role of relational mechanisms and foreign market knowledge**

### **Abstract**

Prior research shows that small and medium-sized enterprises (SMEs) can utilize domestic networks with internationally experienced partners to accelerate their internationalization process. Yet, there is a lack of clarity and limited empirical evidence regarding the role of relational mechanisms within these networks in driving post-entry internationalization speed (PIS) of SMEs. To address this gap, this study examines the relational mechanisms-PIS relationship by drawing insights from the relational view to argue that foreign market knowledge mediates the relationship between relational mechanisms and PIS. The hypothesized study model is tested using a structural equation modelling (SEM) technique on a sample of 394 UK based manufacturing SMEs. Our results show that foreign market knowledge acquisition from domestic networks fully mediates the relationship between relational mechanisms and PIS. Additionally, the linkage between foreign market knowledge acquisition and PIS is moderated by domestic environmental hostility, such that the relationship is strengthened when domestic environmental hostility increases. We discuss the contributions and implications of our results and suggest opportunities for future research.

**Keywords:** Relational mechanisms; foreign market knowledge; post-entry internationalization speed; domestic environmental hostility; SMEs.

## 1. Introduction

Many scholars perceive internationalization as a process that comprises multiple successive stages (Johanson & Vahlne, 1977); “by definition, internationalization behavior takes place over time, manifests in a time sequence in which events occur” (Jones & Coviello, 2005, p. 7). This perspective has also received significant attention from the international business and small and medium-sized enterprises (SMEs)<sup>1</sup> research community (Acedo & Jones, 2007; Kalinic & Forza, 2012). However, several process-oriented studies, which investigated why and how SMEs internationalize from inception, differentiated between two distinct, yet related, issues: the speed of early internationalization (defined as the time lag between the founding of a firm and its initiation of international operations) and the post-entry internationalization speed (hereafter PIS - the time between the first and subsequent international activities) (Prashantham et al., 2019). The former has been widely examined (Weerawardena et al., 2007; Zhou, 2007), but the latter has received much less attention (Safari & Chetty, 2019; Sadeghi et al., 2018).

PIS is defined as the average rate at which a firm achieves its targets after entering a specific market (Morgan-Thomas & Jones, 2009; Sadeghi et al., 2018). Empirical research shows the importance of PIS and its connection to various organizational outcomes, including internationalizing success (Chetty et al., 2014) and general performance (Hilmersson & Johanson, 2016). Despite progress in the field, it is notable that little is known about the antecedents of PIS (Ibeh et al., 2018; Morgan-Thomas & Jones, 2009), with the exception of a few conceptual and empirical insights (Khan & Lew, 2018; Prashantham et al., 2019). Specifically, we identified three key issues that remain under-explored. First, although a small, but growing, number of studies suggest that networks and alliance networks<sup>2</sup> are vital to gaining tangible and intangible resources to facilitate PIS (Eva, 2014; Prashantham et al., 2019; Yu et al., 2011), our understanding of network management mechanisms as an enabler for SMEs’ PIS is still underdeveloped (Ibeh et al., 2018; Puthusserry et al., 2019). This limitation of our knowledge is critical as relational rents should not be taken for granted (Masiello & Izzo, 2019). Research shows that SMEs’ engagement in a network does not automatically unlock its potential benefits (Puthusserry et al., 2019). Instead, firms demand specific network behaviors and relational management practices to achieve the expected benefits (Forsgren, 2016). In other words, the ability of SMEs to exploit their relationships with partners to expand in the global market depends largely on SMEs’ approaches to creating, managing, and maintaining these relationships (Masiello & Izzo, 2019). Addressing the underlying mechanisms for effective networks during the post-entry phase is critical given SMEs’ limited resilience and resource base (Niittymies & Pajunen, 2019).

Second, extending from the previous point, previous researchers identified a connection between foreign market knowledge (as intangible resources) and the internationalization of SMEs (Casillas et al., 2015), positing that the acquisition of such knowledge can speed entry into international markets (Casillas & Moreno-Menéndez, 2014; Oviatt & McDougall, 2005). However, the conditions that enable

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<sup>1</sup> The term SMEs is defined in various ways in the literature; in this study, we define SMEs as firms with 250 or fewer employees (Higón, 2012; Requena-Silvente, 2005).

<sup>2</sup>Notably, the extant literature on networks often use the term ‘alliance networks’ (e.g., Iurkov & Benito, 2017; Shi et al., 2014; Manolova et al., 2010) to indicate firm’s voluntary arrangements with diverse organizations (both horizontally and vertically) including customers, suppliers, competitors and/or research institutions (Montoro-Sanchez et al., 2018), that involve the exchange, sharing, or co-development of products, technologies, or services, and can take a variety of forms (Gulati, 1998). Following this research, the ‘networks’ we refer to in this study are ‘alliance networks’.

SMEs to acquire foreign market knowledge through their domestic networks and achieve PIS remain unexplored (Puthusserry et al., 2018). Exploring this gap can offer substantial contributions to theory and practice, as many studies indicate that domestic networks are based in local markets, and thus serve as a feasible option for SMEs to acquire foreign market knowledge for coordinating and driving internationalization activities (Milanov & Fernhaber, 2014; Yu et al., 2011). This can also improve the resource commitment to these activities, which can eventually boost internationalization performance (Musteen et al., 2014a; Stoian et al., 2017). Third, the role of environmental conditions required for network and PIS relationships remains unexplored. Galkina and Chetty (2015) argued that internationalization opportunities are created by firms due to specific environmental conditions. The external control model also suggests that the environment has a dominant influence on the behavior of organizations; and that firms must align with environmental conditions to realize superior performance abroad (Romanelli & Tushman, 1986). Therefore, more research is necessary to investigate the contingent role of environmental uncertainty in the relationship between networks and PIS (Prashantham et al., 2019).

In this study, we address the gaps above by building on the relational view (Dyer & Singh, 1998) and on the insights from the SME international business literature. The relational view suggests that relational mechanisms, defined as partners' behaviors and interactions within their networks (Lavie et al., 2012), govern and guide exchange partners to exploit the resources available in domestic network relationships (Dyer & Singh, 1998; Dyer et al., 2018). In addition, the theory proposes that these mechanisms are vital for the effective governance (i.e. to safeguard parties from the risk of opportunism and streamline their interactions) that would be needed for efficient knowledge sharing across domestic partners (Dyer et al., 2018). Accordingly, we ask the following question: How do relational mechanisms and foreign market knowledge affect the PIS of SMEs? To answer this question, the current study develops and empirically tests a conceptual model using a dataset of 394 manufacturing SMEs in the United Kingdom (UK). In this endeavor, this study makes three contributions to the network and international business literature.

First, we aim to extend the existing studies on network and internationalization by explicating the conditions for SMEs to benefit from their networks and achieve their PIS (Agostini & Nosella, 2019; Zhou, 2007). Specifically, we consider the role of relational mechanisms to appropriate value from their domestic networks to achieve PIS (Cavusgil & Knight, 2015). Moreover, we explain how foreign market knowledge influences the effect of the relational mechanisms on SMEs' PIS. Although Dyer et al. (2018) argued that effective relational governance and knowledge sharing coevolve over time, the theoretical specifications and empirical analysis of how knowledge can act as a potential avenue through which networks might drive firms' agenda for PIS are still incomplete (Prashantham & Young, 2011; Puthusserry, Khan et al., 2020). In this way, we extend the relational view to a new stage, accounting for the mediating role of foreign market knowledge in the relationship between relational mechanisms and PIS. We argue that relational mechanisms provide firms with an opportunity to acquire knowledge about foreign markets to move forward and subsequently achieve PIS.

Second, international business and SME research suggests that domestic environmental conditions (e.g., technological change, competitive intensity) can drive small firms to seek opportunities beyond domestic markets (Khan & Lew, 2018; Musteen et al., 2014b). However, to date, it remains unclear whether domestic environmental hostility can facilitate or depress the effect of foreign market knowledge on PIS (Autio, 2017; Jiaju & Williams, 2020). Thus, this study aims to conceptualize and

examine the potential moderating role of domestic environmental hostility in the relationship between foreign market knowledge and PIS.

Third, PIS researchers have long focused on international new ventures (INVs) (Prashantham & Young, 2011; Sadeghi et al., 2018). However, INV firms are fundamentally different from traditional SMEs; INVs start international operations within several years of founding and possess a strong orientation toward internationalization (Thai & Chong, 2008), but traditional SMEs typically adopt a gradual internationalization approach due to their sensitivity to the external environment (Kalinic & Forza, 2012). Therefore, to contribute to the contextual understanding of PIS, this study will focus on empirical analysis of the complex causal patterns that emphasize the potential of typical UK SMEs to operate during the post-entry phase. Small firms have played, and continue to play, a significant role in the growth of the UK economy. Since 2011, SMEs have driven more than 70% of private-sector employment growth (Rhodes, 2018). Thus, we advance international business research by accounting for traditional SMEs and showing how these firms can utilize domestic network relationships to acquire the foreign market knowledge needed to promote their PIS.

In the following section, we provide an overview of the study's theoretical background and develop the hypotheses. Then, we discuss the methodology and present the empirical results. The paper concludes with a discussion that clearly articulates the study's contributions.

## **2. Theoretical background**

This study focuses on the role played by relational mechanisms and foreign market knowledge in facilitating PIS. Therefore, before presenting the model, we establish the theoretical foundation of the study by critically discussing the concept of PIS (concerning SMEs) and its antecedents using the relational view.

### *2.1. Internationalization speed: a critical factor in the SME internationalization process*

The internationalization speed is a key concept in the international business and SME literature (Lin, 2012; Weerawardena et al., 2007). It is often perceived as a rapid entry into foreign markets (Weerawardena et al., 2007; Zucchella et al., 2007). However, in this sense, the concept of internationalization overlaps with other notions, such as born-global (Weerawardena et al., 2007), international entrepreneurship (Freeman et al., 2006), and new venture internationalization (Prashantham & Young, 2011; Tang, 2011). As a result, a distinction has recently been drawn between (1) initial-entry internationalization speed, the time lag between the founding of a firm and its initiation of international operations, and (2) PIS, the speed of achieving subsequent objectives in international markets (Hsieh et al., 2019; Morgan-Thomas & Jones, 2009). Although the latter view has received less attention in comparison to the former (Prashantham & Young, 2011; Sadeghi et al., 2018), both emphasize that internationalization is a time-based process (Casillas & Acedo, 2013). However, distinguishing between initial entry and PIS is "particularly critical for the long-term growth and success or failure of firms" (Prashantham & Young, 2011, p. 277). In particular, the transition from early internationalization to post-entry speed requires significantly more time, resources, and commitment to intensify market penetration, exploit new opportunities, and attract new customers (Kiss et al., 2013). This is particularly relevant for SMEs given they have limited resources and must use them effectively (Chetty et al., 2014). Thus, it is important to understand how SMEs adapt, augment, and entrench their PIS (Welch & Paavilainen-Mäntymäki, 2014).

Networks, both domestic and international, represent a critical resource for SMEs to achieve PIS, as shown in Appendix A (Autio, 2017; Galkina & Chetty, 2015). In particular, such networks not only allow small firms to overcome resource constraints but also facilitate recognition of new opportunities and understanding of international market conditions to realize PIS (Khan & Lew, 2018; Prashantham et al., 2019). However, domestic networks are arguably more beneficial for SMEs' internationalization efforts (Milanova & Fernhaber, 2014). Indeed, SMEs, as compared to large multinational firms, suffer from a lack of international reputation and liability of smallness that hinder the formation of international ties (Zhang et al., 2016). As a result, domestic partners with international experience act as a substitute to provide the information and advice that are important for learning and succeeding in international markets (Ciravegna et al., 2014; Manolova et al., 2010). Knowledge and information accessed from domestic networks can be reconfigured and combined in a way that increases SMEs' PIS (Patel & Terjesen, 2011).

That said, there remains a need to highlight the behavioral dimensions of domestic networks (including how they are managed) in relation to their effect on the knowledge and PIS of SMEs. A recent systematic review of internationalizing firms recognized the importance of networks and called for further research to consider behaviors that can guide resource and knowledge exchange in domestic networks for the PIS of SMEs (Zahoor et al., 2020). To identify these behaviors, we turned to the relational view.

## 2.2. *The relational view*

The relational view, in contrast to the resource-based view that focuses on the firm level, posits that organizations can build upon and exploit resources that reside in firms' inter-organizational relationships (Dyer & Singh, 1998). Thus, the domestic network is regarded as a strategy that firms can use to access tangible and intangible resources that cannot be obtained through typical market transactions (Eisenhardt & Schoonhoven, 1996; Lavie, 2006). This implies that domestic networks have the potential to provide advantages to small firms by offsetting their smallness and resource constraints during their internationalization efforts (Lee et al., 2015; Sullivan-Taylor & Branicki, 2011).

The relational view identifies avenues for relational rents, where knowledge-sharing routines and effective governance are vital components for creating network value. Knowledge-sharing routines are a pattern of regular interactions that allows the transfer, recombination, and creation of specialized knowledge (Grant, 1996). They are the source of relational competitive advantage in that the transfer of knowledge creates opportunities for firms to develop productive relationships that would otherwise not be possible (Dyer & Hatch, 2006). In strong relationships, small firms are better able to share knowledge (specifically, tacit knowledge that is beyond the reach of other firms) to solve organizational problems and establish learning routines (Bojica et al., 2017).

However, effective governance, defined as self-enforcement governance mechanisms (Kano, 2018), plays a critical role in increasing the willingness of partners to engage in the collective value creation process (Dyer et al., 2018). Governance mechanisms help firms by not only reducing the cost of partner search, negotiation, and network monitoring (Kano, 2018) but also minimizing the opportunistic risk (Wu et al., 2017). There are two governance mechanisms to ensure value creation: *contractual mechanisms* to specify the rights and obligations of partners and *relational mechanisms* to promote suitability and mutual coordination within the relationship (Calabrò & Mussolino, 2013;

Dyer & Singh, 1998). Although both mechanisms are relevant (Liu et al., 2017), relational mechanisms emerged as more effective, especially in association with knowledge exchange (Ferraris et al., 2018; Li et al., 2010). This is because the embedded network qualities (e.g., strong relational ties) can reduce uncertainty and promote the establishment of long-lasting relationships (Park et al., 2017). In the presence of relational mechanisms, exchange partners show mutual respect and share information as they are bound by a common identity and cooperative adaptation (Zhou & Xu, 2012). However, research on the relational view is lacking, despite its usefulness in providing an understanding of internationalization (Vahlne & Bhatti, 2019). Therefore, we contend that the adoption of the relational view for the PIS of small firms can offer new insights into SMEs' formation, governance, and evolution of domestic networks.

With regard to SMEs' PIS, investigating the tenets of the relational view can advance our understanding for the nested relationship between knowledge sharing and relational mechanisms within domestic networks. SMEs can typically acquire knowledge from multiple classes of networks in domestic markets, namely, horizontal partners (firms located in the same industry) and vertical partners (firms specialized in particular activities of the supply chain) (Mesquita & Lazzarini, 2008). These domestic networks would, therefore, be necessary for PIS by SMEs as internationally experienced partners give access to diverse types of knowledge needed to overcome barriers in global markets (Eberhard & Craig, 2013; Langseth et al., 2016). However, knowledge sharing or relational mechanisms alone do not automatically lead to PIS (Dyer et al., 2018; Mu et al., 2008). Instead, knowledge-sharing routines are contingent on the relational mechanisms (as an important aspect of effective governance) that exist between partners (Kale et al., 2000). As effective relational mechanisms encourage transparency and reciprocity (Poppo et al., 2008), they provide greater potential for partners to generate relational rents through knowledge sharing (Dyer & Singh, 1998; Wang et al., 2008).

## *2.2. Relational mechanisms*

Relational mechanisms refer to partners' behaviors and interactions during the course of a network relationship (Lavie et al., 2012). These mechanisms can enhance the effective governance of networks (Kale et al., 2000; McEvily & Marcus, 2005). The most prominent relational mechanisms are mutual trust, relational embeddedness, and relational commitment (Lavie et al., 2012).

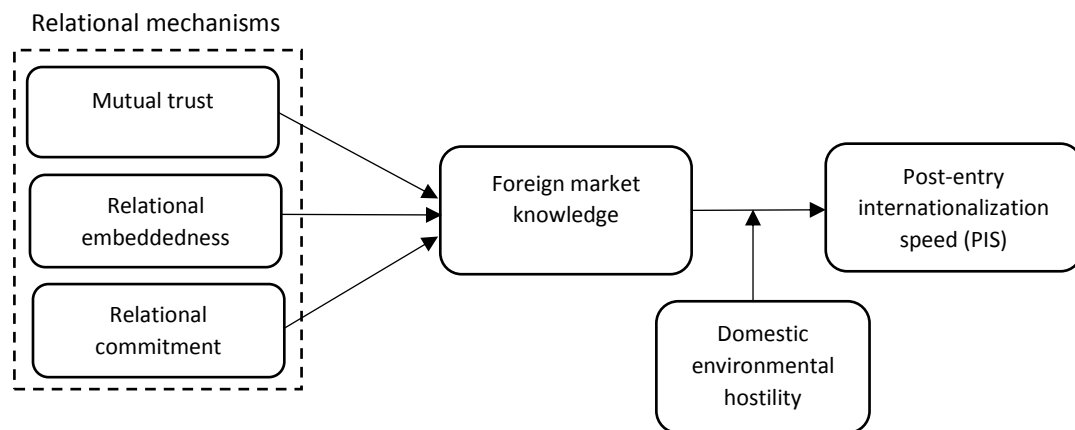
Mutual trust concerns the extent to which a firm believes that its exchange partner will behave as expected in fulfilling their obligations (Lavie et al., 2012; Zaheer et al., 1998). It signifies that the organization trusts its external partners and vice versa (Svensson, 2001); mutual trust among partners is shared, rather than being a one-way trust relationship (Chen et al., 2009). Thus, mutual trust establishes predictability, facilitates resource exchange, and supports reciprocity (Lavie et al., 2012).

Relational embeddedness refers to the degree to which exchange partners have a social attachment, close ties, and mutual understanding (Bonner & Walker, 2004; Granovetter, 1985). Relational embeddedness allows partners to develop and exchange specialized knowledge (Bonner & Walker, 2004), reduces concerns about loss of proprietary information, and minimizes goal conflicts (Dhanaraj et al., 2004).

Finally, relational commitment demonstrates partners' intentions to establish enduring, reciprocal obligations in their network relationships (Lavie et al., 2012; Madhok, 1995). The intention to maintain an enduring relationship promotes a long-term orientation such that partners forgo short-term alternatives in favor of strengthening an ongoing relationship (Gulati et al., 1994). To maintain an ongoing relationship, partners make relationship-specific investments to show their commitment to their exchange partners (Gulati et al., 1994; Sarkar et al., 2001) and thus improve the effectiveness of domestic networks (Dyer & Singh, 1998; Sarkar et al., 2001).

### 3. Conceptual framework and hypotheses

This study examines the effect of relational mechanisms on the PIS of SMEs that are mediated by foreign market knowledge (Fig. 1). We aim to enhance the understanding of these mechanisms by integrating the moderating effect of domestic environmental hostility.



**Fig. 1.** The conceptual framework of the study.

#### 3.1. Relational mechanisms and foreign market knowledge

In international business literature, a large number of studies considered networks as an important determinant of SMEs' internationalization (e.g., Belso-Martínez, 2006). It has been argued that networks with international partners provide SMEs access to tacit knowledge (e.g., information about country-specific laws and regulations) and explicit knowledge (e.g., knowledge of foreign languages and customers' taste) about the operations and activities of foreign markets (Musteen et al., 2014a). However, recent studies have highlighted the specific role of domestic networks in SMEs' internationalization. For example, Montoro-Sanchez et al. (2018) and Torkkeli et al. (2019) found that collaboration with domestic partners who have international experience is important in driving firms' understanding of the internationalization process. Indeed, the international experience of domestic ties can allow SMEs to identify and efficiently access information on international operations and market demands, which underpin their capacity to develop foreign market knowledge (Gil-Barragan et al., 2020). Also, these domestic networks are vital to recognizing and exploring potential opportunities in the international market (i.e., expanding their international knowledge and experience) without allocating significant resources that might stretch SMEs' capacity to a risky limit (Idris & Saridakis, 2018). Furthermore, domestic networks promote firms' absorptive capacity by expanding the technological knowledge coverage in close proximity, eventually enhancing foreign market knowledge (Ali et al., 2020).

However, SMEs need relational mechanisms to acquire foreign market knowledge from their domestic partners because they can prompt mutual understanding and openness (Idris & Saridakis, 2018; Li et al., 2010). Although these relational mechanisms are conceptually and empirically related, they may have different abilities to influence knowledge sharing (Li et al., 2010). By drawing on the relational view, we specify the differential impacts of these relational mechanisms on the acquisition of foreign market knowledge.

### 3.1.1. Mutual trust and foreign market knowledge

Mutual trust concerns the belief that the “actions of the exchange partners will be beneficial rather than detrimental” (Child, 2001, p. 275). In domestic networks, collective network benefits may be sacrificed for individual gains, especially when transparency is lacking (Hoffmann et al., 2010). However, proponents of the relational view argue that opportunistic behavior can be avoided in the presence of mutual trust because partners will favor long-term partnership interests instead of short-time individual gains (Gaur et al., 2011; Liu et al., 2018). Thus, mutual trust enables cooperation between domestic network partners by creating the norm that the two parties will consider the other’s interests (Zhang et al., 2016).

Mutual trust is important for enhancing knowledge transfer (Inkpen & Tsang, 2005). When parties have mutual trust, they share valuable knowledge, because they know that they will not be hurt by their partners (Rauniar et al., 2019). Consistent with the relational view (Dyer & Singh, 1998), mutual trust fosters knowledge transfer by creating idiosyncratic sharing routines to facilitate the exchange of information (Bojica et al., 2017). Therefore, we suggest that mutual trust among domestic network partners fosters SMEs’ acquisition of foreign market knowledge. Because SMEs’ managers have limited international experience and a limited knowledge base, domestic network partners with international experience can provide valuable knowledge about foreign markets (Idris & Saridakis, 2018). In particular, in collaborative relationships characterized by mutual trust, parties are willing to develop joint activities and maintain frequent interactions, thus sharing information and creating knowledge about foreign markets (Cesinger et al., 2016). The expectation that partners will not behave opportunistically also encourages them to share tacit foreign market knowledge (e.g., language, social codes) and obtain information cues that might be difficult to obtain (e.g., customer’s preference; Fink & Kraus, 2007). Further, when there is mutual trust, partners are willing to share detailed information and complementary knowledge in a timely manner (Yli-Renko et al., 2002). Thus:

**Hypothesis 1:** In a domestic network, there is a positive relationship between mutual trust and SMEs’ acquisition of knowledge of foreign markets.

### 3.1.2. Relational embeddedness and foreign market knowledge

Relational embeddedness refers to a relational mechanism that consists of direct cohesive ties (Rowley et al., 2000). It motivates domestic network partners to exchange complex information more freely due to more frequent interaction and emotional closeness (Inkpen & Tsang, 2005). Similarly, Levin and Cross (2004) suggested that cohesive interaction facilitates deeper understanding of a partner’s operations, which ultimately provides access to knowledge that is well-matched to the needs of the receiving party. In the same view, closer and repeated interaction with domestic network partners ensures strong ties and enhances small firms’ opportunities for acquiring knowledge



(Menzies et al., 2020). Examining the relevance of embeddedness for knowledge transfer among small firms, Dhanaraj et al. (2004) suggested that strong relational ties establish a shared communication protocol that enhances the transfer of tacit knowledge that is otherwise difficult to acquire.

Relational embeddedness should therefore help identification and acquisition of foreign market knowledge for SMEs. Specifically, foreign market knowledge is beneficial for small firms, but it is costly in terms of the time and effort a firm must allocate to acquire it (Stoian et al., 2017). Consistent with the relational view, relational ties can help overcome this barrier because strong ties are conducive to the sharing of market-specific knowledge (Dyer et al., 2018; Sharma & Blomstermo, 2003). As Ali et al. (2020) have suggested, strong ties with domestic partners allow SMEs to ask more questions about foreign market conditions, and acquire information about the socioeconomic, cultural, and political environments prevalent in foreign countries. In addition, repeated interactions with domestic partners help small firms build routines over time that support the acquisition of valuable and fine-grained knowledge about foreign markets (Puthusserry et al., 2019). Thus:

**Hypothesis 2:** In a domestic network, there is a positive relationship between relational embeddedness and SMEs' acquisition of knowledge of foreign markets.

### 3.1.3. Relational commitment and foreign market knowledge

Relational commitment is related to partners' intentions to attempt to build an exchange relationship (Lavie et al., 2012). In successful relationships, coordinated actions based on relational commitment should be performed to gain mutual benefits (Lee & Lim, 2003). The confidence that partners will comply with the negotiated practices and act in favor of the involved parties can also enhance the realization of the full value of domestic network relationships (Yoo et al., 2019). Similarly, relational commitment is relevant for knowledge transfer in SMEs. For example, relational commitment involves a sense of obligation and encourages partners to communicate and exchange information (Yam & Chan, 2015). Furthermore, when partners signal a commitment to long-term relationships and indicate a willingness to make an investment (Muthusamy & White, 2005), knowledge transfer would be promoted due to reduced self-seeking behavior and greater cooperation (Bianchi & Saleh, 2020).

We therefore postulate that relational commitment is conducive to SMEs' attempts to acquire knowledge about foreign markets through domestic networks. The relational view suggests that the extent of relational commitment influences partners to share knowledge (Dyer et al., 2018). For example, in the presence of relational commitment, SMEs can establish procedures and adjustments to access knowledge about foreign institutions and managerial practices. Furthermore, relational commitment in domestic networks guarantees the development and maintenance of exchange relationships, which provide SMEs an opportunity to learn from internationally experienced partners (Sambasivan et al., 2013). More importantly, in domestic networks, relational commitment allows partners to gain market knowledge about geographically distant markets (Feng et al., 2019; Isidor et al., 2015), which is otherwise difficult and costly to replicate using informational market research (Sullivan Mort & Weerawardena, 2006). Efforts of committed partners create a social climate to transfer information about the preferences of customers in foreign markets (Menzies et al., 2020), insight into commercial potential, and proximity to emerging markets through which opportunities can be seized (Tolstoy, 2010). Thus:

**Hypothesis 3:** In a domestic network, there is a positive relationship between relational commitment and SMEs' acquisition of knowledge of foreign markets.

### *3.2. Foreign market knowledge and PIS*

Although the impact of foreign market knowledge on the internationalization success of small firms has been studied (Musteen et al., 2014a; Stoian et al., 2017), our aim is to explicitly investigate the role of foreign market knowledge acquired through domestic networks in expediting the achievement of internationalization objectives set for the post-entry stage. Moreover, we aim to provide new insight into the dynamics of this relationship by investigating the moderating effect of the external environment (Ciravegna et al., 2018).

In general, foreign market knowledge is essential for successful internationalization (Casillas et al., 2009). In this respect, Liesch and Knight (1999, p. 386) suggested "an SME's readiness for involvement in international markets can be interpreted as being a function of its state of informedness on targeted foreign market(s)". However, due to the liabilities of smallness and foreignness, SMEs may not be able to accumulate the knowledge necessary for accomplishing their internationalization targets during the first phase of foreign market entry by relying solely on in-house resources (Swoboda & Olejnik, 2016). Therefore, SMEs can leverage their networks and learn from the international experience of their network partners to build up necessary market knowledge capabilities (Stoian et al., 2017). In this regard, Prashantham and Young (2011) posited that stronger networks would allow INVs to assimilate the market and technological knowledge needed for PIS.

In this study, we extend this line of reasoning by proposing that the foreign market knowledge acquired from domestic networks can be specifically vital for SMEs' PIS. In principle, relational-based foreign market knowledge can promote the organizational learning, defined as the 'process of improving actions through better knowledge and understanding' (Fiol & Lyles, 1985, p. 803), of SMEs (Gerschewski et al., 2018). This is particularly true for such firms considering their size-related peculiarity (Ciravegna et al., 2014). In other words, it is feasible for SMEs to access and accumulate foreign market knowledge from internationally experienced domestic partners (Montoro-Sanchez, Diez-Vial, & Belso-Martinez, 2018), where these networks can specifically facilitate SMEs' continuous learning about international markets opportunities, their degree of attractiveness, their local competition, and their cultural and institutional environments (Milanov & Fernhaber, 2014; Vissak et al., 2020). This knowledge, in turn, is used by SMEs to develop specialized products and services for customers and downstream market segments before entering such markets (Gerschewski et al., 2018), which can, explain the speed of SMEs in achieving their international market objectives (Zahoor et al., 2020).

More specifically, given the high level of empathy and familiarity between firms in the same country (Milanov & Fernhaber, 2014; Saadatyar, Al-Tabbaa, Dagnino, & Vazife, 2020), it is easier for SMEs to integrate the diverse and deeply embedded foreign market knowledge from their domestic internationally experienced partners (Puthusserry et al., 2020). This knowledge integration/transfer increases the absorptive capacity of SMEs to correctly identify and acquire new external information and deploy within the firm boundaries (Chetty et al., 2014; Surdu et al., 2018). When absorptive capacity is stronger, the chances of achieving PIS will increase because it will be easy for SMEs to understand international market preferences and thus identify the subsequent knowledge required to accommodate these preferences (Zhang et al., 2014). As noted by Oviatt and McDougall (2005),

and Wu and Voss (2015), absorptive capacity allows a small firm to, not only obtain additional international market and technological knowledge, but also access new business ideas and approaches (Wu & Voss, 2015). In other words, SMEs can achieve PIS due to their ability to outperform other firms with limited absorptive capacity (Prashantham & Young, 2011).

Domestic networks are also characterized by high quality and frequency that foster effective the transmission of internationalization experience, much needed for the creation of stronger foreign market knowledge base (Pinho & Prange, 2016). In effect, these characteristics help SMEs to timely reconfigure their existing knowledge with the newly acquired external knowledge, providing a global perspective on international market opportunities and conditions (Rodríguez-Serrano & Martín-Armario, 2019). Indeed, the exploration and reconfiguration of foreign market knowledge renders SMEs' dynamic capabilities to quickly identify market opportunities (i.e., sensing) and retain these opportunities (i.e., seizing) (De Silva, Al-Tabbaa, & Khan, 2019; Langseth, O'Dwyer, & Arpa, 2016). With these capabilities, SMEs would benefit from early identification and realization of international market opportunities conducive to rapid internalization (Khan & Lew, 2018). In this regard, Swoboda & Olejnik (2016) argue that foreign knowledge acquired through networks can reveal innovative ideas and encourage proactive identification of international opportunities faster than competitors whose lacking such advantage. Accordingly, SMEs can exploit business opportunities ahead of their competitors by offering tailored products and services, improving segmentation of potential clients, and introducing culturally sensitive promotions (Prashantham & Young, 2011) that would speed the achievement of post-entry objectives (Gil-Barragan, Belso-Martínez, & Mas-Verdú, 2020). Similarly, and from a broader perspective, Milanov and Fernhaber (2014) assert that domestic networks represent powerful learning avenues to better appreciate the pitfalls in managing the process of internationalization, and thus substitutes for the lack of management team's international experience of the targeted foreign market. Taken together, foreign market knowledge acquired through domestic relational mechanisms is conducive to SMEs' PIS due to efficient and effective exploitation of foreign business opportunities. Thus,

**Hypothesis 4:** In a domestic network, there is a positive relationship between foreign market knowledge and SMEs' PIS.

### *3.3. Domestic environmental hostility as a moderator*

Domestic environmental hostility is defined as unfavorable external conditions in the home market (Torkkeli et al., 2012), which can result from an intense rivalry among competitors, changes in demand conditions, radical industry changes, or severe regulatory burdens (Zahra & Garvis, 2000). The effect of domestic environmental hostility has long been discussed in international business and SME literature (Matanda & Freeman, 2009; Westhead et al., 2004), showing that it can drive SMEs to consider the global market as a strategy for escaping threats and uncertainties in their home market (Bell et al., 2004; Musteen et al., 2014b). We predict that domestic environmental hostility moderates the ability of SMEs to exploit foreign market knowledge for PIS.

Domestic environmental hostility motivates small firms to diversify into international markets. However, in a challenging environment small firms are likely to dedicate their limited resources to survival rather than internationalization efforts (Ciravegna et al., 2014). In this context, we contend that SMEs that have access to relation-driven knowledge of foreign markets are better positioned to achieve PIS. The accumulation of foreign market knowledge from network partners allows small firms to overcome resource constraints by enabling them to explore foreign business opportunities and

achieve PIS (Musteen et al., 2014a). Under the conditions of domestic environmental hostility, chances are greater that there will be divergence between small firm offerings and customer demands in the firms' home markets (Javalgi & Todd, 2011). In this situation, knowledge about foreign markets can direct a small firm to international activities due to the availability of information about foreign market conditions and customer demand. In a similar vein, Dimitratos et al. (2004) found that domestic environmental hostility leads to internationalization of entrepreneurial SMEs because it induces them to seek better opportunities abroad. Taken together, we postulate that when SMEs operate in markets where domestic environmental hostility is high, they are more ready to exploit foreign market knowledge for PIS. Thus:

**Hypothesis 5:** The presence of domestic environmental hostility strengthens the positive effect of on SMEs' PIS.

## **4. Methodology**

### *4.1. Empirical setting: SMEs in the UK manufacturing sector*

SMEs are well-recognized in the world for their significant contribution to economic development, job creation, and the welfare of economies. In the UK, SMEs (10–250 employees) are undoubtedly a central pillar of the economy, as they provide 60% of all private-sector employment in the UK, with an annual turnover of £2.0 trillion (or 52% of all private-sector turnover) (Wright, 2018). In the manufacturing industry, SMEs account for 70% of business R&D and have the greatest share of exports, with 81% selling goods outside the UK (Oxford Economics, 2018).

Against this background, we selected UK manufacturing SMEs to test our hypotheses for several reasons. First, the manufacturing sector is characterized by a long product development cycle, increased R&D cost, intense uncertainty, and complicated regulatory procedures (Belso-Martínez, 2006). Therefore, the desire for PIS adds further complexity for small manufacturing firms. Thus, relational mechanisms are relevant for manufacturing SMEs that face competitive and fast-paced business cycles. Second, with SMEs accounting for 57% of all UK manufacturing, it is a viable option for SMEs to increase their PIS to conquer domestic competition. Third, in this study, we could control the effect of exogenous factors by focusing on a single sector and single country.

### *4.2. Data collection*

To test the model and the hypotheses, we used survey data. The survey was designed based on a thorough review of the literature. The main parts of the questionnaire consisted of 1) background information, 2) relational mechanisms, 3) foreign market knowledge, 4) PIS, and 5) domestic environmental hostility. All items were measured based on a 7-point Likert scale to provide the respondents with a wide range of possible answers.

Pre-tests were conducted with academics and practitioners to affirm the appropriateness of the questionnaire for the study context (Stoian et al., 2017). In the first pre-testing stage, four professors provided feedback. In the second pre-testing stage, structured interviews were conducted with 10 experienced managers and/or executives of SMEs who commented on the clarity of the questionnaire. As a result of the feedback, we removed unclear questions to lessen potential perceptual biases. We also added two screening questions in the questionnaire: (1) has your firm actively participated in alliances that involved the participation of external organizations, such as customers, suppliers, competitors, consulting firms, universities? (Yan & Wagner, 2017); and (2) has your firm participated

in alliances with internationally experienced organizations located in the domestic markets? (Idris & Saridakis, 2018). The two questions aimed to ensure that the participating SMEs have: 1) network alliances experience (i.e., screening question 1), and 2) domestic alliance experience (screening question 2).

A random list of companies was derived from a directory of UK-founded firms, made available by the Financial Analysis Made Easy (FAME) database. The advantage of using this database is that it allows the fields of inquiry for users to access information related to industry, firm size, and key contact names. An online survey was designed, which was scripted in Qualtrics and distributed by email (Antonetti et al., 2019). Initially, 2000 SMEs covering the OECD (2011) classification of manufacturing companies were approached.

The screening questions were included at the beginning of the survey. Only those participants who responded 'yes' to both screening questions were allowed to complete the questionnaire. To further assure that the participants had sufficient knowledge, we asked them to what degree they were knowledgeable to answer the questions (1 = "not at all knowledgeable" and 4 = "extremely knowledgeable"). To ensure valid and reliable responses were included, only respondents who were very knowledgeable and extremely knowledgeable about network phenomena were considered in the analysis (Yan & Wagner, 2017). In addition, we used two attention check questions on the questionnaire excluding participants who failed these questions. The Qualtrics restriction was set to allow one response per IP address to protect against double-counting of responses (Goodman et al., 2013).

Of the 2000 useable SMEs, only 904 qualified to take the survey based on two screening questions. However, 457 failed the attention checks, and 49 lacked the acceptable level of knowledge. Thus, we collected a total of 394 usable responses out of a total of 398 complete responses, providing a response rate of 19.7%. Of the firms that responded, 167 (42%) were high-tech, 123 (31%) were medium-tech, and the remainder were low-tech firms (27%). Among the respondent firms, 38% were small, and 62% were medium-sized firms. In terms of export experience, 55% of firms had less than 10 years of experience, and the remainder had 10 or more years of export experience. The informants were mostly senior to middle-level managers (89%). Low-level managers made up the remainder (11%). Concerning the degree of knowledge, the average score of 3.2 suggests that informants had sufficient knowledge about the firm's operations and network activities.

#### *4.3. Non-response bias and common method bias*

To assess the non-response bias, we compared early versus late respondents across various firm characteristics (Armstrong & Overton, 1977). The first 20% of respondents were considered early respondents, and the last 20% of respondents were considered late respondents. Both groups were evaluated based on the number of employees, the nature of the industry, and the number of export countries. The means and t-tests showed no statistically significant difference between the two groups (Wu & Cavusgil, 2006), suggesting that non-response bias is not an issue in this research.

A survey-based study may face the problem of common method bias (CMB) due to self-reported measures from a single informant. Following Podsakoff et al.'s (2003) recommendations, we used various procedural remedies to reduce the risk of CMB: (1) maintaining the anonymity and confidentiality of the informants throughout the survey process; (2) using different scales and changing the Likert-scale anchors; (3) assuring the respondents that there is no right or wrong

answers; and (4) provision of the definition of key terms to the respondents. In addition to procedural remedies, we used statistical tests to assess whether and to what extent CMB constituted a serious issue in the data. First, we restrained all items to load on only one factor in confirmatory factor analysis (CFA) as suggested by Chang et al. (2010). Kline (2016) argued that numerous goodness-of-fit indices from different families of measures should be employed to assess the model fit. Therefore, we employed three types of goodness-of-fit indices: parsimonious (i.e., chi-square ( $\chi^2$ ) and normed chi-square ( $\chi^2/df$ )), incremental (i.e., comparative fit index (CFI) and normed fit index (NFI)), and absolute (i.e., root mean squared error of approximation (RMSEA)). The fit statistics ( $\chi^2 = 2291.47$ ;  $\chi^2/DF (238) = 9.63$ ); CFI ( $> 0.9$ ) = .66), NFI ( $> 0.9$ ) = .64); and RMSEA ( $< 0.08$ ) = .15) did not show a good fit, suggesting that a single factor did not account for all the variance in the data. Second, we applied the marker variable technique by including a marker variable in the model (Podsakoff et al., 2012). We used the respondents' job position as a marker variable (Gao et al., 2018). The variables were not statistically significantly related to the marker variable, and the correlation between the constructs of interests remained statistically significant with the introduction of the marker variable as a control. Overall, the analyses suggested that CMB was not an issue of concern in this study.

#### 4.4. Measurements of variables

The measures were derived from literature, with a few items adapted to the study. The measures for the study variables are listed in Appendix B.

*PIS.* This variable is defined as the speed at which the firm achieved its targets after entering a specific market (Hilmersson et al., 2017; Prashantham et al., 2019). Consistent with previous studies, we conceptualized PIS by juxtaposing the time span with the achievement of specific objectives (Hilmersson et al., 2017; Li et al., 2015). On the questionnaire, using four items, respondents were asked to evaluate the firm's achievement of stated objectives during the first two years of entry in a specific foreign market (Khalid & Bhatti, 2015; Li et al., 2015).

*Relational mechanisms.* This variable was based on three mechanisms, mutual trust, relational embeddedness, and relational commitment (Lavie et al., 2012), in the domestic networks. Mutual trust was measured using five items adapted from Lavie et al. Relational embeddedness was measured using three items adapted from Lavie et al. Relational commitment was measured using three items adapted from Lavie et al.

*Foreign market knowledge.* Foreign market knowledge was conceptualized as the level of international market knowledge (e.g., knowledge about foreign language, norms, laws, and so on) (Musteen et al., 2014a). To capture the extent of foreign market knowledge, we focused on the relationships between the SMEs and their key alliance partners (including suppliers, customers, competitors, distributors, and investors) in the domestic markets. Building on Bruneel et al. (2010) and Stoian et al. (2017), we asked each firm to evaluate the level of its foreign market knowledge acquired through domestic alliance partners (Li, Wei, et al., 2010; Stoian et al., 2017). To measure foreign market knowledge, five items were developed based on Stoian et al. (2017) and Zhou (2007).

*Domestic environmental hostility.* It was conceptualized as unfavorable domestic external conditions due to varying market, demographic, and institutional factors (Zahra & Garvis, 2000). The respondents were asked to assess the extent to which the domestic industry environment in which the firms operated was characterized by unfavorable conditions (Musteen et al., 2014b). Domestic environmental hostility was measured using four items adopted from Torkkeli et al. (2012).

*Control variables.* The study employed several controls to make sure that the model represented only the hypothesized relationships. First, we controlled for the effect of firm size. Firm size was measured as the total number of employees. Second, we controlled for the effect of export experience that could affect the PIS. The effect was operationalized as the number of years the firms had spent in the international market. Third, we used the industry type as a control variable. Previous studies showed that the type of industry a firm belongs to affects the internationalization speed, as some industries opt for fast internationalization to many countries, while others move more incrementally (Lindstrand & Hånell, 2017). Thus, industry type could affect the model. We divided the sample into a high-, medium-, and low-technology industry sectors.

## 5. Results

We assessed the hypothesized model using structural equation model (SEM) in AMOS 26.0. SEM is a powerful analytical technique that bridges theoretical and empirical knowledge for a better understanding of the reality (Kline, 2016), and has been widely used (Lindstrand & Hånell, 2017). In particular, SEM was a suitable analytical technique for this study as a series of separate, yet interrelated, dependence relationships were estimated simultaneously. The data analysis consisted of two parts. First, the measurement model was assessed to examine the construct validity of the study scales. Second, the hypothesized structural model was examined.

### 5.1. Measurement model

CFA of the six underlying latent constructs produced adequate fit ( $\chi^2 = 483.434$ ;  $\chi^2/DF (< 3) = 2.17$ ;  $p < 0.001$ , CFI ( $> 0.9$ ) = 0.96, NFI ( $> 0.9$ ) = 0.92, and RMSEA ( $< 0.08$ ) = 0.05) for the full measurement model. Following Kline's (2016) steps, we referred to standardized residual covariance and modification indices to improve the model fit. Covariance was added between the error terms of 3a and 3c, between 4a and 4b, between 4c and 4d, and between 5c and 5d (see Appendix B). These minor steps were reasonable approaches to improve model fit given that the items are all indicators of the same latent construct (Bollen & Lennox, 1991; Byrne, 2010; Kline, 2016). In addition, modification indices suggested loading item 1e onto other latent constructs; therefore, we deleted this item. The revised model showed a statistically significantly improved fit ( $\chi^2 = 201.13$ ;  $\chi^2/DF (< 3) = 1.13$ ;  $p > .11$ , CFI ( $> 0.9$ ) = 0.99, NFI ( $> 0.9$ ) = 0.97, and RMSEA ( $< 0.08$ ) = 0.02).

Next, we evaluated the reliability and validity of the measurement scales through three different tests. First, item reliability examines the factor loadings for reflective constructs. By convention, the factor loadings should be greater than 0.70 (Hair et al., 2010), which was the case for the items in our study (except for item 1e of mutual trust, which was removed). Second, convergent validity was analyzed to determine internal consistency through Cronbach's alpha (CA) and composite reliability (CR); both statistics must be greater than 0.70. The average variance extracted (AVE) was also analyzed; a value is greater than 0.50 is recommended (Kline, 2016). Convergent validity was confirmed in our study as all parameters were above the cut-off points (Appendix B). Third, discriminant validity was evaluated by comparing the square root of AVE between two constructs with their correlation (Fornell & Larcker, 1981). Table 1 shows that the square root of AVE for each pair of constructs is greater than the correlation between the constructs, indicating satisfactory discriminant validity. Finally, variance inflation factors (VIF) were calculated to assess multicollinearity. The VIF ranged from 1.49 to 2.21, which is well below the common threshold of 10 (Hair et al., 2010) and a more rigid threshold value

of 5 (Kock & Lynn, 2012). Thus, multicollinearity among the variables was not a serious threat in this study.

**Table 1**

Mean, standard deviations, and correlations of all the constructs.

	M	SD	1	2	3	4	5	6
(1) Mutual trust	5.43	1.15	<b>0.83</b>					
(2) Relational embeddedness	5.45	1.15	0.72	<b>0.83</b>				
(3) Relational commitment	5.37	1.12	0.78	0.67	<b>0.79</b>			
(4) Foreign market knowledge	4.91	1.20	0.51	0.49	0.57	<b>0.79</b>		
(5) Post-entry internationalization speed	5.12	1.07	0.57	0.54	0.57	0.75	<b>0.81</b>	
(6) Domestic environmental hostility	4.36	1.19	0.32	0.27	0.37	0.67	0.43	<b>0.81</b>

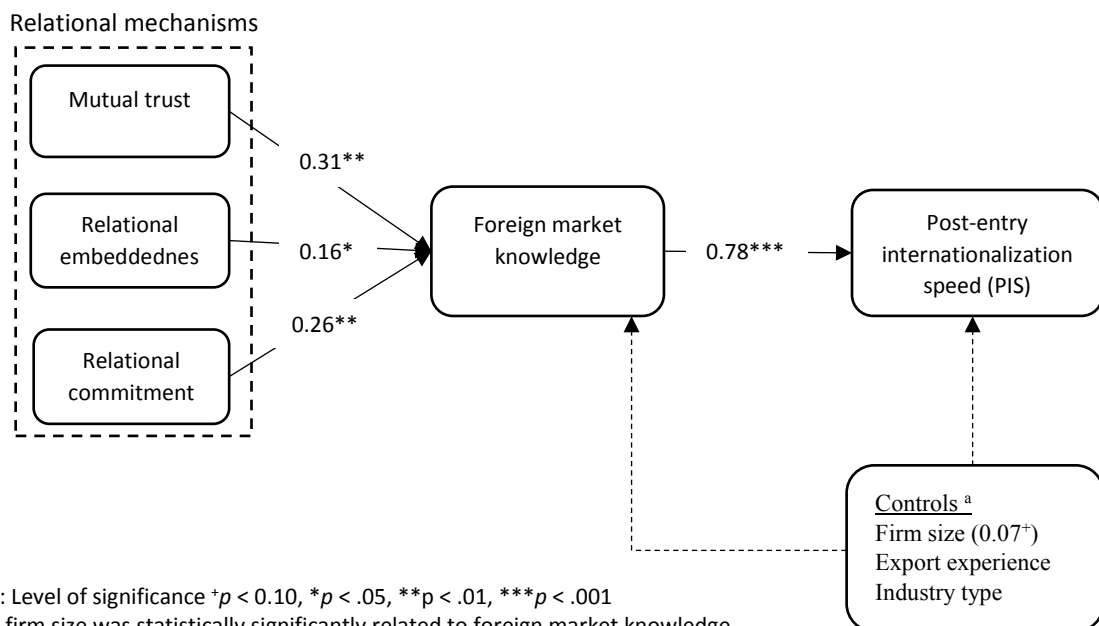
Notes: M = mean; SD = standard deviation.

Diagonal bold values are the square root of AVE.

### Structural model and hypotheses testing

We assessed the model fit of the structural model in AMOS 26.0 before we tested the study hypotheses. Following Williams et al. (2009), we allowed the control variables to covary with the relational mechanisms. Further, we included direct paths from the control variables to foreign market knowledge and PIS. We ran the structural model, and goodness-of-fit indices showed a good fit (i.e.,  $\chi^2 = 201.13$ ,  $\chi^2/DF (178) = 1.13$ ;  $p > 0.1$ , CFI ( $> 0.9$ ) = 0.99, NFI ( $> 0.9$ ) = 0.96 and RMSEA ( $< 0.08$ ) = 0.02).

Fig. 2 presents the structural estimates of the model including the controls. Of the three postulated constructs related to relational mechanisms, a statistically significant positive effect on foreign market knowledge was seen for each of the mechanisms: mutual trust ( $\beta = 0.31$ ,  $p < 0.01$ ), relational embeddedness ( $\beta = 0.16$ ,  $p < 0.05$ ), and relational commitment ( $\beta = 0.26$ ,  $p < 0.01$ ); H1, H2, and H3 were supported, respectively. Hypothesis 4, which predicted a positive relationship between foreign market knowledge and internationalization speed, was also supported ( $\beta = 0.78$ ,  $p < 0.001$ ).



Notes: Level of significance <sup>†</sup> $p < 0.10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

<sup>a</sup> Only firm size was statistically significantly related to foreign market knowledge.



**Fig. 2.** Structural model results.

### 5.2. *The mediating role of foreign market knowledge*

To avoid limitations associated with traditional approaches for assessing the mediation effect (Preacher & Hayes, 2008), we used an ordinary least square regression approach to path analysis (Hayes, 2013). Using PROCESS macro Model 4, we generated 95% bias-corrected confidence intervals for the indirect effect based on 5000 bootstrap resamples (Hayes, 2013). Table 2 presents the indirect effects for the dependent variables with a bootstrap lower-level limit confidence interval (BLLCI) and a bootstrap upper-level limit confidence interval (BULCI). As the intervals for the mediating effect contain no zeros, the statistically significant indirect effect confirmed that foreign market knowledge mediates the impact of relational mechanisms on PIS.

**Table 2**

Mediating effects using PROCESS.

	Indirect effect	BLLCI	BULCI
Mutual trust → Foreign market knowledge → PIS	0.28	0.21	0.35
Relational embeddedness → Foreign market knowledge → PIS	0.24	0.17	0.32
Relational commitment → Foreign market knowledge → PIS	0.29	0.22	0.37

Note: BLLCI (bootstrap lower-level limit confidence interval); BULCI (bootstrap upper-level limit confidence interval)

To assess the mediation effect more rigorously, Sobel, Aroian, and Goodman tests, which are designed to determine whether the impact of the mediating variable on the relationship between independent and dependent variables is statistically significant (Newbert, 2008), were conducted. The results highlighted in Table 3 show that the Sobel, Aroian, and Goodman test statistics were statistically significant, thus providing support that the mediating effect of foreign market knowledge is statistically significant.

**Table 3**

Mediating effects using Sobel, Aroian, and Goodman tests.

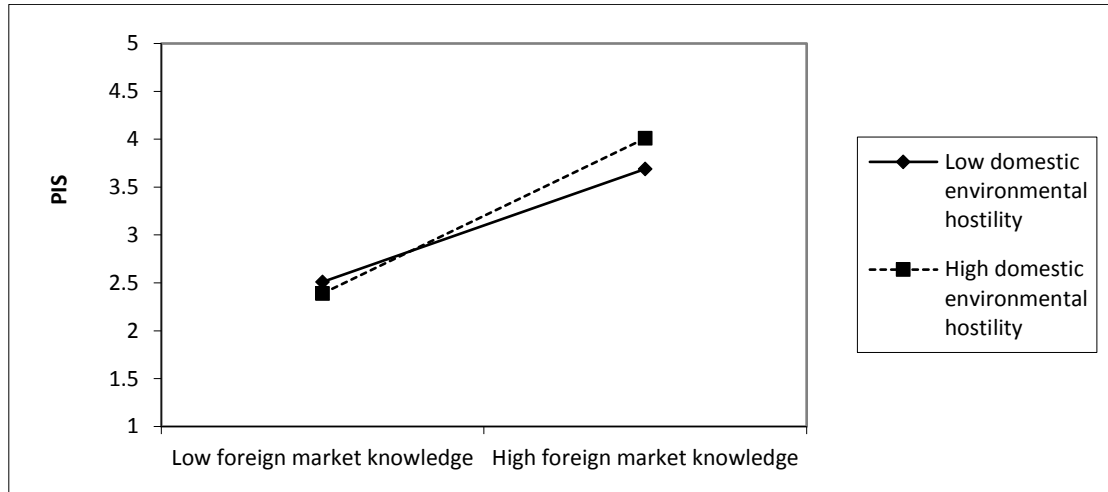
Mediated relationship	Sobel	Aroian	Goodman
Mutual trust → PIS	2.89**	2.88**	2.89**
Relational embeddedness → PIS	2.55**	2.55**	2.56**
Relational commitment → PIS	3.21**	3.21**	3.22**

Notes: Level of significance: \*\* $p < .01$ .

### 5.3. *The moderating role of domestic environmental hostility*

Hypothesis 5 predicted that domestic environmental hostility moderates the relationship between foreign market knowledge and PIS such that the positive relationship is pronounced when the level of domestic environmental hostility is high. To test this hypothesis, we used the multi-group structural equation modeling method commonly used in international business studies (Navarro-García et al., 2016; Ngo et al., 2016). The average score of the four measurement items of domestic environmental

hostility was used to develop the taxonomy. Two groups were identified: 232 for the low-hostility group and 162 for the high-hostility group. The multigroup analysis suggested a difference in the path coefficients for each group coefficient (low group:  $\beta = 0.68$ ,  $p < 0.001$ ; high group:  $\beta = 0.83$ ,  $p < 0.001$ ); thus, Hypothesis 5 was supported. To illustrate the analytical results, we plotted the interaction in Fig. 3.



**Fig. 3.** Moderating effect of domestic environmental hostility.

As a robustness test, we tested the mediation model through the test of the statistical significance of an indirect effect and associated confidence intervals using PROCESS macro (Hayes, 2013). The results showed a significant moderating effect of domestic environmental hostility ( $\beta = 0.06$ ,  $p < 0.05$ ). In addition, the conditional indirect effect of mutual trust on PIS was 0.25 when the level of domestic environmental hostility was low ( $p < .001$ , 95% bootstrapped CI = [0.17, 0.34]), and the indirect effect was 0.34 when the level of domestic environmental hostility was high ( $p < .001$ ; 95% bootstrapped CI = [0.26, 0.44]). The conditional indirect effect of relational embeddedness on PIS was 0.09 when the level of domestic environmental hostility was low ( $p < .001$ , 95% bootstrapped CI = [0.08, 0.11]), and was 0.13 when the level of domestic environmental hostility was high ( $p < .001$ ; 95% bootstrapped CI = [0.11, 0.15]). The conditional indirect effect of relational commitment on PIS was 0.10 when the level of domestic environmental hostility was low ( $p < .001$ , 95% bootstrapped CI = [0.08, 0.11]), and the indirect effect was 0.13 when the level of domestic environmental hostility was high ( $p < .001$ ; 95% bootstrapped CI = [0.10, 0.16]). Overall, the results provided support for the moderated mediation effect.

## 6. Discussion and conclusion

Although much of the literature on SME internationalization has examined speed of entry, the focus on post-entry speed has been scant. It has been noted that network relationships can play an important role in shaping the PIS of small firms (Khalid & Bhatti, 2015; Khan & Lew, 2018). However, recent arguments suggest that network effects might not be uniform across markets (Puthusserry et al., 2020). Thus, in this study, we investigated potential mechanisms that can influence SMEs' PIS by acting on SMEs' domestic networks. Specifically, drawing on the relational view, we examined the effect of relational mechanisms within domestic networks as well as the effect of foreign market knowledge on PIS under the conditions of domestic environmental hostility. We found that foreign

market knowledge acquired locally mediates the link between relational mechanisms and PIS. In addition, the results showed that domestic environmental hostility moderates the relationship between foreign market knowledge and the PIS of SMEs.

Our study provides three main contributions. First, we provided empirical evidence for the antecedents of PIS, which is still lacking (Zahoor et al., 2020). Specifically, by examining foreign market knowledge acquisition from relational mechanisms, we captured the intricate effects of relational mechanisms within domestic networks on SMEs' PIS. To this end, our results suggest that domestic networks can be an important resource for SMEs when international experience of domestic partners is taken into consideration. Domestic networks are typically an efficient alternative to international networks in that they provide more frequent and reliable information to SMEs in their decision to PIS. As noted by Milanov and Fernhaber (2014, p. 388), "learning from domestic partners is more current than the experiences of managers, which might be more generic or diverse in nature". Moreover, domestic networks enable SMEs to overcome a lack of international reputation by providing information that is important for learning and succeeding in international markets (Ciravegna, Lopez & Kundu, 2014; Zahoor et al., 2020).

Our findings further reveal that relational mechanisms are vital for SMEs' foreign market knowledge acquisition through internationally experienced domestic partners. Over time, foreign market knowledge allows SMEs to achieve PIS by overcoming the uncertainty associated with foreign markets and the liability of newness (Prashantham & Young, 2011). These insights broadly enrich the relational view by revealing the mediating role of foreign market knowledge in the relationship between relational mechanisms and PIS (Dyer & Singh, 1998; Prashantham & Young, 2011). Proponents of the relational view state that effective relational governance promotes knowledge sharing to create value for a firm (Dyer et al., 2018). However, empirical evidence for this with regard to PIS remains limited, which, in turn, highlights the contribution of this study.

Second, this study provides nuanced understanding of foreign market knowledge as a predictor of PIS by exploring when it is more effective. Although researchers have examined the role of domestic environmental hostility for internationalization speed (Musteen et al., 2014b), this study offers a contingency perspective that shows that domestic environmental hostility is a crucial boundary condition for the effectiveness of foreign market knowledge in enabling SMEs' PIS efforts. In particular, we show that high levels of domestic environmental hostility strengthen the effect of foreign market knowledge on SMEs' PIS. For example, high levels of domestic environmental hostility might not drive PIS if SMEs possess low levels of foreign market knowledge acquisition. With this finding, we extend the international business literature by shedding light on a contingency model to give clarification on foreign market knowledge-PIS relationship.

Third, we used a unique data set from the UK to show how traditional SMEs, which are important contributors to UK economic growth, can achieve PIS. This is an important addition because much of the literature on PIS focuses on INVs operating in emerging markets (Belhoste et al., 2019; Sadeghi et al., 2018). Although these studies suggested that PIS can be driven by networks, the mere transfer of these research findings from INVs to traditional SMEs is questionable given the sensitivity of SMEs to the external environment (Kiss et al., 2012). In contrast to traditional SMEs, INVs are concerned about value and maximizing profit rather than minimizing their exposure to risks (Dominguez & Mayrhofer, 2017). Therefore, INVs are scarcely affected by the negative impacts of international market uncertainty and do not hesitate to target distant countries rapidly. However, SMEs can achieve PIS

and catch up with INVs only through the strategic focus chosen by these firms (Kalinic & Forza, 2012). Thus, this study examined how and when relational mechanisms serve as an enabler of PIS from the perspective of SMEs in a developed country.

### *6.1. Managerial relevance*

In addition to theoretical implications, this study offers important practical implications. First, SMEs must cultivate the capacity to develop and manage networks with external partners. This entails the implementation of measures to strengthen mutual trust, relational embeddedness, and mutual commitment. For example, SMEs can invest resources to smooth communication and coordination, promoting the relational skills of company executives and encouraging an internal mechanism to disseminate the partner information to all departments. In doing this, the structure of SMEs should be oriented toward increasing awareness of their network partners and strengthening the interrelationship of network partners by implementing communication technologies (e.g., a joint database, intranet, and communication tools) and creating a dedicated network function (i.e., a function intended to strategically coordinate network activities). Although this can be challenging for SMEs given their resource constraints, the firms' small size and flexibility can be advantageous for implementing a simpler infrastructure to manage networks.

Second, implications for managers involve the awareness that foreign market knowledge is needed for PIS. Due to a lack of international experience, decision-makers often undervalue the difference between domestic and foreign market settings. Consequently, this study showed that connectedness in domestic networks and their exploitation using relational mechanism are instrumental factors for SMEs to acquire foreign market knowledge. This will then lead to increasing the PIS of SMEs.

Third, for policymakers, there is a need to design different catalysts for the internationalization of SMEs. Current policy prescriptions focus on access to finance and the creation of patents and technical skills as resources for PIS (Williams et al., 2014). Moving beyond existing studies, the results of this study suggest that policymakers need to build a range of policies and programs to enable the PIS of SMEs in light of nurturing networks. Particularly, policymakers need to design policies and programs that foster the formation and management of networks for SMEs.

### *6.2. Limitations and suggestions for future research*

While the contributions of this study provide avenues for future research, they are also tempered by limitations. The first limitation stems from the limited scope of the study sample of only UK SMEs, and SMEs and large firms have different characteristics and behaviors (Zahoor & Al-Tabbaa, 2020). SMEs are advantageous because they are flexible and can adapt to dynamic market conditions. In contrast, large firms have an advantage over SMEs due to their asset ownership. This difference calls for studies to examine our theoretical model in a sample that includes SMEs and large firms. Such studies would contribute to more robust theorizing on the role of relational mechanisms and foreign market knowledge for PIS. The second limitation is that this study concentrated on relational mechanisms as antecedents of foreign market knowledge and PIS. Other potential antecedents should be considered in future studies. For instance, one view posits that some firms are better at exploiting the domestic networks and obtaining resources due to their capabilities to manage external relationships (Kauppila, 2015). Future studies, therefore, could investigate the role of capabilities to manage domestic networks for foreign market knowledge acquisition and PIS. The third limitation originates due to our focus only on domestic networks without considering the characteristics of such relationships, where recent research has highlighted the effect of domestic network configuration on the internalization of

SMEs (Montoro-Sanchez et al., 2018). Future studies, therefore, can pay attention to the complexity of domestic networks, such as network size or density of network ties, and other contextual contingencies (e.g., the existence of institutional voids (Kim and Song, 2017) in order to better understand the performance of SMEs during the early stage of their internationalization. The fourth limitation concerns the cross-sectional nature of the study, which restricts the ability to make causal inferences. Although the ordering of variables in the conceptual framework is anchored by the relational view (e.g., relational mechanisms lead to foreign market knowledge with PIS), certain links can be reciprocal (e.g., foreign market knowledge and PIS). However, longitudinal research requires the willingness of executives to participate in study. During interviews in the pilot study, executives showed concern about participating in the study on multiple occasions. Future studies can make efforts to conduct a longitudinal assessment of the study's phenomena.

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## Appendix A

A summary for studies that examine the relationship between network and internationalization speed: Early internationalization speed vs PIS

Author	Purpose	Term (T) used and definition (D) for IS	Methodology	Key Findings	Future research directions
<b>Early internationalization speed – the speed of entry in foreign markets</b>					
Freeman, Edwards, and Schroder (2006)	To explore how small firm achieves rapid growth internationally through alliances with suppliers, distributors, and joint-venture partners.	T: Rapid internationalization  D: No explicit definition	Qualitative – semi-structured interviews	Collaborative partnerships can provide access to market knowledge and sharing of the financial burden for rapid, multiple-market expansion and penetration.	To what extent can external (market- and industry-specific characteristics) and internal (knowledge-intensive or scientific knowledge embedded firms) factors affect internationalization for small firms?
Musteen, Datta, and Butts (2014)	To determine the influence of three types of international network embeddedness on internationalization speed.	T: Internationalization speed  D: The amount of elapsed time (in years) between the year of firm founding and the year of its first international venture.	Quantitative – survey of 169 Czech SMEs	Strong and diverse international networks exhibited greater knowledge of foreign markets prior to internationalization performance, but there is no relationship between network density and such knowledge.	Test the effect of network characteristics in other contexts including the developing countries and emerging markets.
Musteen, Datta, and Francis (2014)	To identify and test hypothesized relationships between international ties (in the context of technological innovation and hostile environments) and early internationalization.	T: Early internationalization  D: Internationalization that occurred within the first two years after establishment	Quantitative –Survey of 104 Czech manufacturing SMEs	The reliance on international networks facilitates early internationalization, the relationship is contingent on firms' emphasis on technological innovation and perceived environmental hostility.	Investigate why some transition economy firms choose to operate in domestic market while others actively seek internationalization. Address the question of study in the context of large firms.
Oviatt and McDougall (2005)	To conceptualize and test the effect of entrepreneurial opportunity, knowledge and networks	T: Speed of Internationalization  D: Internationalization speed is defined as the	Conceptual	The model is developed to show the direct influence of technology, competition, the mediating perceptions of entrepreneurs, and the moderating forces of knowledge and networks that	Explore the role of foreign market knowledge for rapid internationalization.

	characteristics (size and density of networks) for the speed of entrepreneurial internationalization.	speed of initial entry, country scope and commitment.		collectively determine the speed of internationalization.	
Tang (2011)	To investigate influential networking behaviours in supporting the internationalization of SMEs.	T: Rapid internationalization  D: A distinction is made between international new venture and traditional internationalizing firm.	Quantitative – Survey of 210 Chinese SMEs	The ability of SMEs to plan and manage networking activities strategically with key partners is beneficial to obtain the influential resources for accelerating internationalization.	Multiple informant approach to data collection. Consider networking aspects, commitment and trust, which involve reciprocity of parties for IS. Replication of model in other countries.
Weerawardena, Mort, Liesch, and Knight (2007)	To present a conceptual model of born global firms that owner manager profile enables them to develop capabilities (marketing, knowledge and networking), for accelerated internationalization.	T: Accelerated internationalization (speed, scope and extent)  D: IS is proposed to be measures as the time to first international activity)	Conceptual	Marketing capability and knowledge-intensity of products are proposed to influence speed.	Test the model of the study by collecting data from multiple countries.
Zucchella, Palamara, and Denicolai (2007)	To develop a theoretical framework of factors (i.e., business, location, entrepreneurial and network) to promote the internationalization precocity.	T: Internationalization precocity  D: It is defined as the early start of international activities (number of years from firm inception to the beginning of the international sales).	Quantitative – Survey of 144 Italian SMEs	The role of the previous experience of the entrepreneur, and especially of their international experience play important role in SMEs precocity as compared to networks.	Consider the role of social networks with appropriate methodologies.
<b>Post-entry internationalization speed – the speed of accomplishing internationalization objectives</b>					
Kiss and Danis (2008)	To establish the interdependent influences of country institutional context and social networks on new venture internationalization processes.	T: Internationalization speed  D: It captures the speed with which a venture enters a specified target country or achieves a	Conceptual	A framework is developed to show that both strong and weak ties may have positive effects on the speed of internationalization, but the relative strength of these effects likely depends on a country's level of institutional development.	The conceptual framework of study needs to be tested using survey or interview data. Future work needs to consider other network-level variables.

		certain level of international performance			
Prashantham, Kumar, Bhagavatula, and Sarasvathy (2019)	To conceptualize the differential effects of effectual and non-effectual network-building approaches on the internationalization speed.	T: Internationalization speed  D: Internationalization speed is multifaceted in nature, involving more than the time elapsed to accomplish internationalization outcomes.	Conceptual	Effectual approach to network-building is positively associated with initial entry speed and international scope speed, but negatively associated with international commitment speed.	Account the role of moderators like firm motivations or institutional environment. Consider the role of quality and intensity of networking actions.
Prashantham and Young (2011)	To develop a conceptual model on social capital's influence on absorptive capacity and knowledge accumulation, which affect the international commitment speed.	T: Post-entry speed  D: It is defined as the speed of international expansion (an increase in percent of international revenues) once a firm becomes an international new venture.	Conceptual	Social capital is associated with acquisition, assimilation, transformation of new knowledge leading to accumulation of market and technological knowledge, which ultimately result in post-entry speed.	Consider the role of cultural distance. Role of the size of the domestic market for IS. Effect of market and technological knowledge on post-entry speed.

## Appendix B

### Measurement scales.

Construct measures	FL	CA	CR	AVE
1. <i>Mutual Trust (1 = strongly disagree; 7 = strongly agree)</i> <i>Please indicate the extent to which the relationship between your firm and its domestic alliance partners is characterized by:</i>		0.89	0.92	0.66
1a Mutual trust	0.77			
1b Reciprocity (e.g. endorsing each other's products, cross-referencing into customer accounts, giving special discounts, matching investments, placing a link on each other's Web site)	0.83			
1c Open communication about all alliance-related issues	0.80			
1d Confidence that each party will keep its obligations	0.84			
1e <i>The firm and its partner carry out their duties as promised (saying what they are going to do and then doing it)</i>	0.68			
2. <i>Relational embeddedness (1 = strongly disagree; 7 = strongly agree)</i> <i>Please indicate the extent to which the employees of your firm and those of its domestic alliance partners:</i>		0.85	0.87	0.69
2a Engage in joint field activities (e.g., trade shows, marketing campaigns, conferences, coordinated presale, training)	0.81			
2b Meet frequently to work together on joint activities	0.82			
2c Have developed good interpersonal relationships that facilitate joint activities	0.86			
3. <i>Relational commitment (1 = strongly disagree; 7 = strongly agree)</i> <i>Please indicate the extent to which your firm and its domestic alliance partners:</i>		0.80	0.84	0.63
3a Invest the resources needed for maintaining alliance operations (e.g., dedicated and trained personnel, marketing funds, engineering resources)	0.83			
3b Regularly share and exchange information	0.75			
3c Have effective conflict resolution mechanisms (e.g., identifying problems, escalating, intervening, communicating, and jointly solving problems to overcome disagreements)	0.80			
4. <i>Foreign market knowledge (1 = much worse than main competitors; 7 = much better than main competitors)</i> <i>Please indicate the level of foreign knowledge acquired from domestic alliance partners.</i>		0.89	0.89	0.62
4a Our top manager's knowledge about foreign language and norms.	0.76			
4b Our top manager's knowledge about foreign business laws and regulations.	0.86			
4c Our top manager's knowledge about the needs of foreign clients/customers.	0.85			
4d Our top manager's knowledge about foreign distribution channels.	0.74			
4e Our top manager's ability in determining foreign business opportunities.	0.74			
5. <i>Post-entry internationalization speed (1 = not at all satisfied, 7 = very satisfied)</i> <i>Please indicate your level of satisfaction with the achievement of objectives in the first two years of entry in a specific foreign market.</i>		0.85	0.88	0.65
5a Growth relative to its stated objectives	0.86			
5b Market share relative to its stated objectives	0.80			
5c Profitability relative to its stated objectives	0.74			
5d Return on investment relative to its stated objectives.	0.83			
6. <i>Domestic environmental hostility (1 = strongly disagree; 7 = strongly agree)</i>		0.88	0.88	0.65

*Please indicate your degree of agreement with the following statements of domestic environmental hostility.*

6a	Access to capital is difficult.	0.83
6b	Products become obsolete quickly.	0.78
6c	Bankruptcy among companies in the industry is high.	0.77
6d	Demand for industry products is declining.	0.83

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Note: FL = factor loadings; CA = Cronbach's alpha; CR = composite reliability; AVE = average variance extracted.