Addressing psychic distance and learning in international buyer-seller relationships: The role of firm exploration and asset specificity

Steven Y.H. Liu [a],[*], Seyda Deligonul [b], S. Tamer Cavusgil [c],[d],[e], Jyh-Shen Chiou [f]

[a] *Centre for International Business at the University of Leeds (CIBUL), UK*
[b] *Retired, Professor of Business Strategy*
[c] *Center for International Business Education and Research (CIBER), Georgia State University, United States*
[d] *University of South Australia Business School, Adelaide, Australia*
[e] *Leeds University Business School, Leeds, UK*
[f] *College of Commerce, National Chengchi University, Taipei, Taiwan*

ARTICLE INFO

ABSTRACT

The psychic distance paradox refers to inconclusive findings on whether psychic distance hinders cross-border performance. To examine the paradox in international buyer-seller relationships, we consider sub-dimensions of relationship learning: information sharing, joint sense-making, and knowledge integration. Our findings show firm exploration and asset specificity perform distinctive and complementing roles in addressing psychic distance. Firm exploration mitigates psychic distance challenge on both information sharing and joint sense-making. In contrast, asset specificity only alleviates psychic distance challenge on knowledge integration. Overall, this study extends understandings of the psychic distance paradox by specifying contextualized learning and critical contingencies in international buyer-seller relationships.

1. Introduction

Prior research suggests the "psychic distance paradox" in international business (IB) and calls for future research on this issue (Assadinia, Kadile, Gölgeci, & Boso, 2019; Evans & Mavondo, 2002; Evans, 2011; O'Grady & Lane, 1996; Sinha, Wang, Scott-Kennel, & Gibb, 2015). The paradox refers to empirical findings that psychic distance does not necessarily imply barriers for the performance of cross-border operations (O'Grady & Lane, 1996). Extant studies explore the psychic distance paradox with investigations of MNEs, subsidiaries, international new ventures, and exporters (Assadinia et al., 2019; Coldwell & Joosub, 2018; Hang & Godley, 2014; Sinha et al., 2015). However, we see room to offer further analysis regarding the psychic distance paradox in international buyer-seller relationships.

Limited attention to international buyer-seller relationships leads to two issues in understanding the psychic distance paradox. First, psychic distance's theoretical premise is that it suppresses learning across borders (Johanson & Vahlne, 1977, 1990). Building on the premise, extant research demonstrates the psychic distance paradox with inconclusive findings between psychic distance and cross-border performance (Assadinia et al., 2019; O'Grady & Lane, 1996; Sinha et al., 2015).

However, prior studies pay little attention to the heterogeneity of learning mechanisms. Organizational learning studies find that learning mechanisms vary across contexts, such as within organizations, between dyadic organizations, and among networked organizations (Holmqvist, 2003; Knight, 2002; Lane & Lubatkin, 1998; Powell, Koput, & Smith-Doerr, 1996). Accordingly, to fully understand the psychic distance paradox, consideration to learning context is critical to establishing the theoretical relevance (Teagarden, Von Glinow, & Mellahi, 2018). Nevertheless, prior work in the psychic distance paradox does not consider the context in international buyer-seller relationships.

Second, without a contextual focus, research has not fully explored the advantageous aspects of international buyer-seller relationships in coping with psychic distance challenge. Stahl and Tung (2015) criticized IB research to over-emphasize the negative side of cross-national distance, suggesting that future research should instead explore coping strategies to mitigate cross-national distance. According to the authors, research on mechanisms for managing cross-national distance will help shape the academic vision of the IB field in a more profound, constructive, and positive way (Stahl & Tung, 2015; Stahl, Tung, Kostova, & Zellmer-Bruhn, 2016; Tung & Stahl, 2018). Following their suggestion, this study examines under what conditions international

buyer-seller relationships may better manage psychic distance challenge. Specifically, we aimed at answering the following research question: Why do some international buyer-seller relationships have greater resilience to psychic distance than others?

To address these research gaps, we incorporated the relationship learning perspective to analyze psychic distance in international buyer-seller relationships. Relationship learning refers to joint activities, routines, and understandings that facilitate knowledge creation and transfer between two businesses (Cheung, Myers, & Mentzer, 2010; Jean, Sinkovics, & Kim, 2010; Kim, Cavusgil, & Cavusgil, 2013; Selnes & Sallis, 2003). Relationship learning research suggests that learning exists and operates in business relationships (Jean, Sinkovics, Kim et al., 2010; Selnes & Sallis, 2003). Studies have shown the mechanisms, activities, and benefits of relationship learning (Jean, Sinkovics, & Cavusgil, 2010; Jean, Sinkovics, Kim et al., 2010; Selnes & Sallis, 2003). Therefore, applying the relationship learning perspective allows a contextualized examination of psychic distance in international buyer-seller relationships.

Specifically, this study examines the sub-dimensions of relationship learning (Cheung et al., 2010; Jean, Sinkovics, Kim et al., 2010; Selnes & Sallis, 2003). That is, we analyze the impact of psychic distance on three relationship-learning dimensions: information sharing, joint sense-making, and knowledge integration (Cheung et al., 2010; Selnes & Sallis, 2003). Information sharing entails early-level learning between business entities with established routines of sharing information, message, and ideas (Selnes & Sallis, 2003). Joint sense-making is the mid-level learning with joint interpretations on the information shared in specific business relationships (Selnes & Sallis, 2003). Knowledge integration refers to high-level learning that both parties share and constantly update relationship-specific understandings (Selnes & Sallis, 2003). A full consideration of these sub-dimensions differentiates our study from predominant research in relationship learning (Jean, Sinkovics, Cavusgil et al., 2010; Jean, Kim, Chiou, & Calantone, 2018; Selnes & Sallis, 2003). In this regard, we offer a novel analysis to examine whether psychic distance erodes across early-, mid-, and high-level aspects of learning in international buyer-seller relationships.

Regarding relationship conditions, we accounted for firm exploration and asset specificity for theoretical reasons. Prior research suggests firm heterogeneity is important to understanding the psychic distance paradox (Evans, 2011; O'Grady & Lane, 1996; Sinha et al., 2015). Building on this view, we considered the role of firm exploration. Exploration manifests in a firm's flexibility, openness, and level of inclusiveness to appreciate novel business practices (March, 1991; Welch & Welch, 2009). Extant IB studies indicate that firm exploration is a key factor in dealing with the challenges that can arise from cross-national distances (Luo & Tung, 2007; Luo, 2001; Stahl et al., 2016; Tung & Stahl, 2018). In a similar vein, Stahl and Tung (2015) suggest that firm exploration is a critical practice to help transform the liabilities of cultural distance into assets. Accordingly, we propose and examine whether firm exploration plays a role in managing psychic distance challenge.

We considered asset specificity because of its importance in international buyer-seller relationships. In the context of buyer-seller relationships, multiple meta-analyses find asset specificity the most critical factor in terms of driving relationship dynamics and performance (Johnston, Le, & Cheng, 2018; Leonidou, Samiee, Aykol, & Talias, 2014). Relationships learning studies also finds asset specificity facilitating relationship learning to best utilize past asset-specificity investments (Jean, Sinkovics, Kim et al., 2010; Jean, Chiou, & Sinkovics, 2016; Jean et al., 2018; Selnes & Sallis, 2003). Therefore, accounting for asset specificity appropriately follows our conceptual ground of relationship learning perspective, as well as the contextual focus of international buyer-seller relationships (Cheung et al., 2010; Jean et al., 2016; Jean, Kim, & Bello, 2017; Jean et al., 2018; Liu, 2012; Selnes & Sallis, 2003).

Our study provides twofold contributions to the psychic distance

paradox and the broader IB field. First, this study accounts for the sub-dimension of relationship learning. We verify that, although the concept of psychic distance was introduced in internationalization process literature (Johanson & Vahlne, 1977), psychic distance also significantly impacts international buyer-seller relationships. Specifically, our results show the prevalence of psychic distance challenge across information sharing, joint sense-making, and knowledge integration. By doing so, we better clarify the boundary condition of psychic distance in a novel context.

Second, our results demonstrate the roles of firm exploration and asset specificity in coping with psychic distance in international buyer-seller relationships. The findings demonstrate that firm exploration mitigates psychic distance challenge on information sharing and joint sense-making, but firm exploration does not address psychic distance challenge in knowledge integration. On the other hand, asset specificity tackles psychic distance challenge in knowledge integration, but asset specificity does not contribute to resolving psychic distance challenge in either information sharing or joint sense-making. Taken together, these two relationship conditions perform distinctive and complementing roles in addressing psychic distance. Our results offer novel insights into the contingencies of international buyer-seller relationships in undertaking psychic distance challenge.

The remainder of this paper is organized as follows. First, we introduce the background literature and theories, including psychic distance, relationship learning, exploration, and asset specificity. Next, we present our research hypotheses, methodology, and empirical results. Finally, we conclude with theoretical extensions and managerial implications, as well as the limitations of this study.

2. A review of key concepts

2.1. Psychic distance in international buyer-seller relationships

Psychic distance refers to the unfamiliarity arising from perceived differences across nations, including differences in aspects of culture, language, institutions, and business practices (Evans & Mavondo, 2002; Johanson & Vahlne, 1977; Yamin & Sinkovics, 2006). Psychic distance portrays a critical challenge for companies to understand international markets (Johanson & Vahlne, 1990; Sousa & Bradley, 2006). O'Grady and Lane (1996) note "there is an implicit assumption that psychically close countries are more similar, and that similarity is easier for firms to manage than dissimilarity, thereby making it more likely that they will succeed in similar markets (p.3)." IB research uses the concept of psychic distance to account for overall barriers of learning across national borders (Johanson & Vahlne, 1977, 1990).

Along with the rich discussions of psychic distance in IB, prior research in international buyer-seller relationships also examined the psychic distance concept. Hallen and Wiedershiem-Paul (1999) suggested that, in the dynamic and ongoing buyer-seller exchange process, a company's perception of differences between national markets is the primary barrier to cultivating relationships. Conway and Swift (2000) found psychic distance between buyers and sellers to be a salient detriment to trust-building. A great body of follow-up studies further verifies the challenge of psychic distance in cultivating international buyer-seller relationships (Durand, Turkina, & Robson, 2016; Katsikeas, Skarmeas, & Bello, 2009; Khalil, 2019; Obadia, Bello, & Gilliland, 2015; Skarmeas, Zeriti, & Baltas, 2016).

However, psychic distance in international buyer-seller relationship studies shows a deviation from its early conceptual grounds. Psychic distance was firstly introduced to underscore the overall barriers of learning across borders (Johanson & Vahlne, 1977). The Uppsala model suggests the dynamics between psychic distance and learning to be a key driver of incremental internationalization (Johanson & Vahlne, 1990, 2003). Extant works demonstrate the association between psychic distance and learning across multiple IB topics, such as international new ventures (Prashantham & Floyd, 2012), liability of foreignness (Zaheer,

1995), and liability of outsiderships (Johanson & Vahlne, 2009). Therefore, predominant studies in other IB topics are soundly grounded in the theoretical premise that psychic distance challenges learning across borders.

In contrast, while psychic distance appears widely in international buyer-seller relationship studies, little attention has been paid to the interplay between psychic distance and learning in this context. Instead, most studies focus on how psychic distance undermines the relationship factors of trust, commitment, and relationalism (Bello, Chelariu, & Zhang, 2003; Bello, Katsikeas, & Robson, 2010; Durand et al., 2016; Katsikeas et al., 2009; Khalil, 2019). Table 1 summarizes a selection of psychic distance studies in international buyer-seller relationships to show how our conceptualization is a significant departure from the existing studies in this research field.

Further understandings of psychic distance and learning is needed to establish the theoretical relevance in the context of international buyer-seller relationships. Learning theory suggests the heterogeneity of learning mechanisms across different levels, such as within organizations, between dyadic organizations, and across multiple networked organizations (Beeby & Booth, 2000; Carmeli, Zivan, Gomes, & Markman, 2017; Fiol & Lyles, 1985; Holmqvist, 2003; Knight, 2002). The reason is that, collective learning across individuals requires joint

routines and infrastructures to transmit information, build shared interpretations, and store group-specific memories (Fiol & Lyles, 1985). The learning routines and infrastructures across organizational boundaries could be different from the ones within the same organization (Selnes & Sallis, 2003). Therefore, to provide contextual relevance, we draw on the relationship learning perspective to account for learning at the relationship-level.

In addition to clarifying whether psychic distance harms learning in international buyer-seller relationships, our study also explores the psychic distance paradox in this context. The psychic distance paradox refers to the counter-intuitive empirical findings that psychic distance is not always harmful to cross-border business performance (Evans & Mavondo, 2002; Hang & Godley, 2014; O'Grady & Lane, 1996; Sinha et al., 2015). Empirical studies support the prevalence of the psychic distance paradox in multiple IB contexts, such as foreign direct investment (Coldwell & Joosub, 2018), subsidiary performance (Dinner, Kushwaha, & Steenkamp, 2019), international marketing (Durand et al., 2016), online internationalization (Yamin & Sinkovics, 2006), and global team dynamics (Magnusson, Schuster, & Taras, 2014). To reach a more comprehensive understanding of this topic, we attempted to examine whether the psychic distance paradox applies to learning in international buyer-seller relationships.

Table 1

Selected Research on Psychic Distance in International Buyer-Seller Relationships.

Study	Research aim	Theoretical approach	Key findings
Hallen and Wiedershiem-Paul (1999)	Discussing the role of psychic distance in the international marketing practice	- Exchange Theory - Social Categorization Theory	Psychic distance portrays different barriers between marketing for consumer and industrial goods; Highlighting the role of country of origin.
Conway and Swift (2000)	Addressing the impact of psychic distance on relationship marketing	- Relationship Marketing - Social Exchange - Trust	Psychic distance generates higher efforts at the pre-marketing stage; Trust is more difficult to sustain amid the high psychic distance.
Bello et al. (2003)	Studying the drivers and barriers of relationalism between international buyers and sellers	- Relationalism - Social Exchange - Relationship Marketing	Psychic distance is a primary challenge for relationalism-based governance between exporters and importers.
Skarmeas, Katsikeas, Spyropoulou, and Salehi-Sangari (2008)	Investigating the extent to which certain market and exporter characteristics affect the development of relationship quality	- Transaction Cost Economics - Relationship Marketing	Psychic distance increases the information asymmetries between international buyers and sellers and undermines relationship quality.
Katsikeas et al. (2009)	A comprehensive study on the trust-based international buyer-seller relationships	- Trust - Transaction Cost Economics	Psychic distance elevates opportunism and harms mutual trust between international buyers and sellers.
Prime et al. (2009)	Investigating the cause and the range of psychic distance between exporters and importers	- Grounded Theory	Psychic distance arises from differences at interpersonal-level, relationship-level, and national-level.
Leonidou, Palihawadana, Chari, and Leonidou (2011)	Addressing the antecedents and contingency factors of relational adaptation on relationship performance.	- Relationship Marketing - Transaction Cost Economics	Psychic distance presents unfavorable condition for developing relational adaptation, as well as mitigating the benefit of adaptation in relationship performance.
Johnston, Khalil, Jain, and Cheng (2012)	Investigating the role of communication in motivating buyers for joint action.	- Relationship Marketing - Trust	Psychic distance negatively moderates impact the relationship between communication and trust/satisfaction.
Sachdev and Bello (2014)	To determine how export involvement barriers may moderate the effect of transaction cost drivers on control mechanisms	- Transaction Cost Economics - Internationalization	Psychic distance reduction weakened the positive effect between asset specificity and information sharing.
Griffith and Dimitrova (2014)	To investigate the influence of psychic distance on international partner selection and relationship satisfaction	- Psychic distance - Organizational capabilities - Relationship Marketing	Psychic distance lowers the likelihood of choosing international partners with complementing capabilities. The link between complementing capabilities and relationship satisfaction is negatively moderated by psychic distance.
Durand et al. (2016)	To discuss the boundary condition of psychic distance on relational exchange orientation.	- Country of Origin - Expectancy-Value Theory	Product-related country image mitigates the negative impact of psychic distance on the relational exchange orientation.
Leonidou, Aykol, Fotiadis, Christodoulides, and Zeriti (2017)	To investigate the antecedents and contingencies of relational betrayal.	- Social Exchange Theory - Transaction Cost Economics	The impact of psychic distance on betrayal is conditioned by foreign environment uncertainty and foreign market dynamism.
The Present Study	*To explore how psychic distance affects learning in international buyer-seller relationships*	*- Relationship Learning* *- Psychic Distance Paradox*	*Investigating the psychic distance challenge to the three dimensions of relationship learning: information sharing, joint sense-making, and knowledge integration; Identifying the contingency of international buyer-seller relationship to address the psychic distance paradox in the context.*

2.2. Relationship learning

Relationship learning refers to activities and routines that enable information sharing, mutual understanding, and knowledge integration between two exchanging organizations (Cheung et al., 2010; Jean, Sinkovics, Cavusgil et al., 2010; Selnes & Sallis, 2003). Empirical studies find that relationship learning increases bilateral integration, reduces opportunism, and generates superior relationship performance (Carmeli et al., 2017; Jean, Sinkovics, Kim et al., 2010, 2018; Kim et al., 2013). Overall, relationship learning performs a source of interorganizational rents and a driver of superior relationship performance (Dyer & Singh, 1998; Selnes & Sallis, 2003).

The relationship learning perspective considers the learning capability of specific business relationships (Selnes & Sallis, 2003). It suggests that learning at the relationship-level manifests in differentiated relationship routines, activities, and experiences (Cheung et al., 2010; Jean et al., 2016; Selnes & Sallis, 2003; Zollo, Reuer, & Singh, 2002). Because learning in business relationships has differentiated mechanisms, we argue the need to underscore how psychic distance affects relationship learning between international buyers and sellers.

Relationship learning manifests in three sub-dimensions: information sharing, joint sense-making, and knowledge integration (Cheung et al., 2010; Selnes & Sallis, 2003). First, information sharing refers to the routines and activities that are involved in passing on information, messages, and communications between two business entities (Selnes & Sallis, 2003). Information sharing serves as a foundation for relationship learning, as it makes the relationship more efficient and cooperative (Cheung et al., 2010; Jean, Sinkovics, Kim et al., 2010). The reason is that information sharing eliminates information asymmetries and lowers the chance for misunderstanding and conflict.

Second, joint sense-making is defined as the relationship-specific interpretation of the shared information (Selnes & Sallis, 2003). Beyond sharing any statistics, facts, and observations, the parties involved in business relationships could collectively make sense of the shared information to ensure both parties are on the same page. Joint sense-making develops a relationship-specific inference, a shared ground that makes business partnerships more efficient and effective (Jean, Sinkovics, Cavusgil et al., 2010; Selnes & Sallis, 2003). Established joint sense-making eliminates the need for excessive communications or clarifications between buyers and sellers.

Finally, knowledge integration refers to the joint practice of storing and updating relationship-specific memories and understandings (Selnes & Sallis, 2003). Knowledge integration requires established routines and/or processes to formally code or informally communicate the relationship-specific knowledge base (Jean, Sinkovics, Kim et al., 2010, 2017; Jean et al., 2018; Selnes & Sallis, 2003). Knowledge integration makes the relationship more competitive in relationship-specific innovations (Jean et al., 2017). Overall, these sub-dimensions demonstrate that, learning at the relationship-level is idiosyncratic and different from learning at the firm-level (Selnes & Sallis, 2003).

This study differentiates from the existing research by looking into how psychic distance affects the sub-dimensions of relationship learning (Cheung et al., 2010; Jean, Sinkovics, Kim et al., 2010, 2016; Jean et al., 2018; Selnes & Sallis, 2003). Prior research shows that relationship learning enables international buyer-seller relationships to achieve better relational performances (Cheung et al., 2010; Jean, Sinkovics, Kim et al., 2010). Extending from these predominant findings, we explore how sub-dimensions of relationship learning are challenged by psychic distance. Differentiating and examining the sub-dimensions of relationship learning is critical in answering our research question. Psychic distance entails the differences in national business practices that incur learning costs across borders (Johanson & Vahlne, 1977; Yamin & Sinkovics, 2006). In the context of international buyer-seller relationships, it is unclear whether psychic distance would affect all aspects of relationship learning. Therefore, to offer a contextualized investigation of psychic distance challenge, we account for sub-dimensions in relationship learning in developing the research framework.

2.3. Firm exploration

Psychic distance paradox research suggests that companies with appropriate capabilities may more easily cope with the challenges posed by psychic distance than others (Assadinia et al., 2019; Dinner et al., 2019; Evans, 2011; Sinha et al., 2015). Drawing on this insight, we account for the differences in firm practices, arguing that firms with exploration may contribute to the relationship learning dynamics and subsequently address psychic distance more effectively.

Exploration means activities such as market search, experimentation, flexibility, discovery, and innovation, which create new opportunities (March, 1991; Schumpeter, 1934). Exploration shapes an organization's ability to sustain its competitive advantage and long-term growth in a changing environment (Gupta, Smith, & Shalley, 2006). The exploration perspective has been applied in a variety of areas to underscore the merits of learning and knowledge development (Benner & Tripsas, 2012; Benner & Tushman, 2003; Holmqvist, 2004).

Two theoretical rationales led us to pay particular attention to firm exploration. First, prior studies on alliances find that participant's firm-level exploration affects alliance learning (Duysters, Lavie, Sabidussi, & Stettner, 2020; Holmqvist, 2003, 2004; Koza & Lewin, 2000). Koza and Lewin (2000) suggest that each participants' exploration shapes the learning practice at the alliance level. Holmqvist (2003, 2004) also found learning to be an interactive process, where an individual firm's exploration matters in the collective dynamics. Therefore, we consider firm exploration to be a critical factor in the relationship learning of international buyers-sellers.

In addition, prior studies in the IB area suggest the importance of exploration in coping with diverse international environments (Luo & Tung, 2007; Luo, 2001; Stahl & Tung, 2015; Stahl et al., 2016; Tung & Stahl, 2018). Exploration enables MNEs to identify new business opportunities abroad (Johanson & Vahlne, 1990; Welch & Welch, 2009) and manage the challenges arising from cross-border differences (Luo & Peng, 1999). Research finds that exploration reinforces learning in unfamiliar areas and enhances MNEs' understanding when entering into new international markets (Forsgren, 2002; Prange & Verdier, 2011). Indeed, Stahl and Tung (2015) recommended future IB studies to use the March (1991) framework to understand learning across borders and noted: "the need to complement our existing knowledge of the field by looking at the upside of cultural differences (i.e., turning to the "exploration" aspect of organizational learning) (page 20; Stahl and Tung (2015))." Overall, IB research emphasizes the importance of exploration in overcoming barriers to learning from international markets. Extending this view, we examine whether such a notion applies in international buyer-seller relationships.

2.4. Asset specificity

Asset specificity refers to relationship-specific investments that cannot be easily transferred to other relationships (Maekelburger, Schwens, & Kabst, 2012; Williamson, 1985). Although the term was to address the transaction cost issue (Williamson, 1979, 1985), later studies identified the profound and positive role of asset specificity in furthering business relationships. Extant studies demonstrate the importance of asset specificity in trust-building (Katsikeas et al., 2009; Liu, Deligonul, Cavusgil, & Chiou, 2018), gaining reputation and knowledge spillover (Kang, Mahoney, & Tan, 2009), extending relationship longevity (Haugland, 1999), and shaping relationship-specific norms (Bello et al., 2003; Lado, Dant, & Tekleab, 2008). A series of meta-analytical studies confirmed that asset specificity is the most crucial factor in driving buyer-seller relationship performance (Leonidou et al., 2014; Palmatier, Dant, Grewal, & Evans, 2006; Zhong, Su, Peng, & Yang, 2017). Building on these findings, we focused on asset

specificity for its widely accepted importance in this context.

In addition to the contextual relevance, we also considered asset specificity in alignment with the theoretical ground of relationship learning. Extant research finds asset specificity an important factor in relationship learning (Cheung et al., 2010; Jean, Sinkovics, Kim et al., 2010, 2016; Selnes & Sallis, 2003). The rationale is that asset specificity serves as a credible commitment from the investing party (Jean et al., 2016). The investing party would be motivated to further relationship-specific learning to utilize past asset specificity investments (Selnes & Sallis, 2003). Cheung et al. (2010) find that, while asset specificity creates the lock-in condition, such a condition drives the parties to concentrate their attention and resources on developing learning practices in the relationship. Therefore, our consideration of asset specificity builds on prior relationship learning studies.

Aside from the widely discussed association between asset specificity and relationship learning, this study aims to explore the role of asset specificity in addressing psychic distance. According to prior studies, past asset specificity in a relationship creates a favorable condition for relationship learning (Cheung et al., 2010; Jean, Sinkovics, Cavusgil et al., 2010; Selnes & Sallis, 2003). We follow and extend these insights to underscore whether asset specificity creates a unique condition to manage psychic distance for relationship learning. Detailed rationales are provided in the following section, where we look at the research framework and hypotheses.

3. Research framework and hypotheses

We summarize our research framework in Fig. 1. First, we contend that psychic distance between international buyers and sellers undermines relationship learning activities. High psychic distance weakens international buyers and sellers' ability to exchange and communicate under different languages, cultures, and business practices (Johanson & Vahlne, 1977; Yamin & Sinkovics, 2006). These challenges arising from psychic distance constitute substantial barriers to relationship learning.

Psychic distance inflates information asymmetries between international buyers and sellers (Cavusgil, Deligonul, & Zhang, 2004; Hallen & Wiedersheim-Paul, 1999; Obadia et al., 2015). Conflicts, mistrust, and opportunism become more prevalent between exchanging parties with high psychic distance (Bello et al., 2010; Katsikeas et al., 2009). In extreme cases, companies may even refrain from efforts to understand foreign partners with significant psychic distance (Bello et al., 2003). Hence, psychic distance is a critical barrier to relationship learning activities.

More specifically, information sharing is likely to be dampened by language barriers and miscommunication. Psychic distance implies differences in language, culture, and mindset that posit extra costs for information flow across borders (Johanson & Vahlne, 1977). In addition, joint sense-making is likely to be challenged by the dissimilarity between industrial norms and practices. Psychic distance entails the discrepancies in the rules-of-the-game across international markets (Dow & Karunaratna, 2006). These differences in business practices challenge the development of shared interpretation for joint sense-making. Lastly, knowledge integration could also be frustrated by gaps between culture, education, politics, and even religion. Psychic distance implies these gaps between nations' knowledge systems (Dow & Karunaratna, 2006; Johanson & Vahlne, 1977). Such differences amplify the difficulty and cost of knowledge integration between international buyers and sellers. Overall, we argue that psychic distance challenges the development of all aspects of relationship learning:

Hypothesis 1a. *Psychic distance impedes information sharing in international buyer-seller relationships.*

Hypothesis 1b. *Psychic distance impedes joint sense-making in international buyer-seller relationships.*

Hypothesis 1c. *Psychic distance impedes knowledge integration in international buyer-seller relationships.*

Faced with psychic distance, business relationships with explorative firms might help mitigate the adverse effects of psychic distance in learning. Exploration implies the continued pursuit of new knowledge and searching for new possibilities (March, 1991). Levinthal and March (1993) noted that exploration lies in the firm's activities that aim at "the pursuit of new knowledge, of things that might come to be known" (p. 105). When facing high unfamiliarity, exploration would entail "search, variation, and experimentation efforts to generate novel recombinations of knowledge (p. 3; Andriopoulos and Lewis (2009))." Exploration facilitates firm adaptation, especially when faced with radical changes with a break from past experiences (Benner & Tushman, 2003). Accordingly, explorative firms are more likely to appreciate and learn from foreign markets' novel business practices (Stahl & Tung, 2015).

A comparison between firm exploitation and exploration in this context clarifies why firm exploration serves as a critical contingency. We take the initial view of March (1991), which states that, given resource constraints, firms face a trade-off between exploitation and exploration. Exploitation implies the firm's capabilities and practices to refine existing products, processes, and knowledge (Khan, Lew, & Marinova, 2019; Levitt & March, 1988; March, 1991). Exploitative firms thus tend to cultivate their specialized and deep skillsets within a
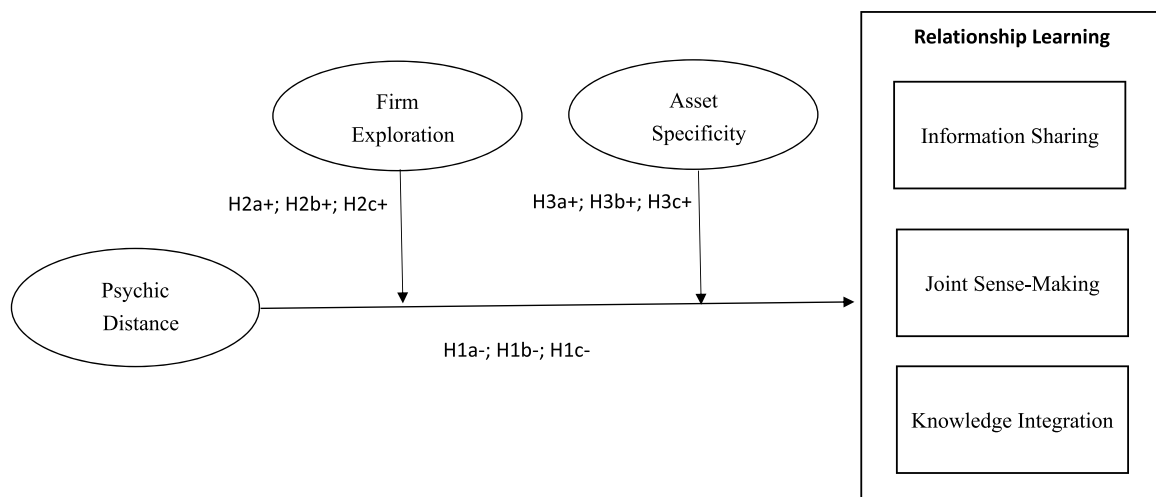

Fig. 1. Research Framework.
Controls: Technological Uncertainty, Performance Ambiguities, Firm Age, Number of employees, Importance of the Relationship, Firm Sales.

particular knowledge domain. However, such a specialized knowledge base might inhibit learning from novel practices in foreign markets. Exploitative firms may find it challenging to understand and learn from foreign business partners with high psychic distance (Khan et al., 2019; Lew, Sinkovics, & Kuivalainen, 2013).

Accordingly, we examine firm exploration in relationship learning with international partners. We argue firm exploration would create a favorable condition in two ways: (1) being open-minded and maintaining a positive attitude toward diverging perspectives from international partners; and (2) being more capable of learning from dissimilar business practices. Such firm characteristics would contribute to relationships by overcoming psychic distance and helping learning practices at the relationship-level. Hence, we suggest:

Hypothesis 2a. *Firm exploration mitigates the negative influence of psychic distance on information sharing in international buyer-seller relationships*

Hypothesis 2b. *Firm exploration mitigates the negative influence of psychic distance on joint sense-making in international buyer-seller relationships*

Hypothesis 2c. *Firm exploration mitigates the negative influence of psychic distance on knowledge integration in international buyer-seller relationships*

As mentioned, previous studies demonstrate that asset specificity creates a positive condition for relationship learning (Cheung et al., 2010; Jean, Sinkovics, Cavusgil et al., 2010, 2017; Jean, Sinkovics, Kim et al., 2010; Selnes & Sallis, 2003). We apply this insight into the interplay between psychic distance and relationship learning in international buyer-seller relationships.

The first positive aspect created by asset specificity is eliminating opportunism concerns (Cavusgil et al., 2004; Liu et al., 2018). Relationship learning requires both parties to expose internal information in order to facilitate a deep and meaningful exchange (Selnes & Sallis, 2003). When one party is concerned that the counterpart might exploit the shared information, they will be less likely to develop a relationship learning practice (Jean, Sinkovics, Kim et al., 2010). Concerns of opportunism could further be intensified by psychic distance in international buyer-seller relationships because psychic distance implies dissimilar behavioral presumptions (Dow & Karunaratna, 2006; Katsikeas et al., 2009). However, we argue that, asset specificity provides a favorable condition to ease such opportunism concerns from psychic distance. Studies indicate that asset specificity signals a credible commitment by the investing party to the relationship (De Vita, Tekaya, & Wang, 2010; Liu et al., 2018). Ongoing asset specificity also cultivates the long-term, stabilized, and high-trust international buyer-seller relationships (Cavusgil et al., 2004; Katsikeas et al., 2009). Hence, asset specificity provides the infrastructure to strengthen the resilience of the relationship and protect it from opportunism issues caused by psychic distance.

The second advantage created by asset specificity is that it incentivizes joint motivations. Relationship learning needs joint efforts to build the sustaining learning routines and practices at the relationship-level (Selnes & Sallis, 2003). As mentioned, psychic distance posits high costs and difficulties in establishing the learning practice. The efforts and investments into the progress of relationship learning could be drained and exhausted by psychic distance. Accordingly, psychic distance makes it difficult to sustain enduring motivations to enter into relationship learning. Nevertheless, we argue that, the motivation problem is mitigated when the relationship is conditioned by asset specificity. For the investing party, the lock-in situation makes the party dedicate effort to utilize their past asset-specificity investments (Selnes & Sallis, 2003). For the counterparty, observing the partner's asset specificity motivates joint efforts (Liu et al., 2018). The motivation problem caused by psychic distance can thus be moderated by asset specificity. Building on these rationales, we propose that asset specificity provides a critical contingency that mitigates the psychic distance

challenge in relationship learning:

Hypothesis 3a. *Asset specificity mitigates the negative influence of psychic distance on information sharing in international buyer-seller relationships*

Hypothesis 3b. *Asset specificity mitigates the negative influence of psychic distance on joint sense-making in international buyer-seller relationships*

Hypothesis 3c. *Asset specificity mitigates the negative influence of psychic distance on knowledge integration in international buyer-seller relationships*

4. Methodology

4.1. Data characteristics

This study's sampling pool is the international buyers participating in the Computex Taipei trade show, 2014. Computex Taipei features Taiwan's electronic industry and its related supply chain. Industry elites, innovators, and entrepreneurs gather at the trade show each year to showcase the most advanced and innovative products, attracting more than 38,000 international visitors annually. We chose the Computex Taipei trade show because the electronic industry features high uncertainty and short product life cycles, a context that is appropriate for studying relationship learning.

We collaborated with the host of Computex Taipei to select our sample. Before the trade show, we randomly selected 1300 subjects among the registered buyers. We then contacted each firm to cage their willingness to participate in the survey. 286 buyers replied and agreed to complete the survey at the tradeshow. We asked each respondent to disclose their relationship with the leading international seller. We focused on the buyer's relationship with their primary international seller, which accounted for most of the buyers' overall international procurements in the last accounting year. By using this approach, we ensured that our samples represented key international business relationships. With support from Computex Taipei, our research assistants completed the survey with representatives from these buyer companies. We trained research assistants to ensure appropriate instructions and guidance for buyers who took the survey. The average response time was forty-two minutes.

After eliminating the invalid samples, we had 198 buyer samples, with a final response rate of 15.5 percent. The demographics indicated a variety of sub-industries, with 25.25 % in software/IT, 30.69 % in electronics, 1.5 % in chemicals, 7.9 % in telecommunications: 8.9 % in engineering, and 25.76 % classified as 'other'. As was requested during the initial contact prior to the trade show, the respondents were all managers in charge of their leading seller account. The position of respondents was as follows: owners (5.9 %); top managers (17.3 %): middle managers (36.6 %); and procurement account managers (20.7 %). The average number of years of industrial experience among all respondents was 7.4 years. Because Computex Taipei is an international tradeshow, we had buyer-seller pairs from different continents across the globe. Buyers were from Asia (52.71 %), Europe (19.7 %), North America (11 %), South America (3%), Middle-East (8.59 %), Oceania (3%), and Africa (2%). They reported that their primary international sellers were from Asia (71.72 %), North America (17.68 %), Europe (9.6 %), and Middle-East (1%).

We collected our data from the international buyers for the following reasons. First, whereas sellers have full information about the products or services sold, buyers may not and hence taking higher risks during market transactions (Buckley & Casson, 1976). As buyers are in an unfavorable position, we argue buyers' exploration and asset specificity in addressing psychic distance are critical in this context. Second, we conducted our study in the global electronics industry, where relationship learning is vital in addressing the fast-changing and knowledge-oriented industrial environment (Jean, Sinkovics, Cavusgil et al., 2010, 2018). In this industrial context, buyers generally have alternative sourcing options from multiple sellers and take the leading

role (Kang et al., 2009). Lastly, relationship marketing studies also suggest that buyers tend to have the authority to initiate the transition of the buyer-seller relationship (Dwyer, Schurr, & Oh, 1987; Heide & John, 1992). Therefore, we analyzed the buyers' firm exploration and asset specificity in shaping the learning context of international buyer-seller relationships.

Our focus on international buyers also arises from the severe challenges of collecting dyadic data in our research context. In the electronic industry with high competition, a buyer's primary supplier is sensitive information that many respondents choose not to disclose. A dyadic dataset also implies that, sellers will know they are contacted because their sales accounted for a buyer's most procurement in the previous year. Many buyers concerned such information exposed to their primary supplier may put these buyers in a vulnerable position in future partnerships. Some buyers even addressed they come to the trade show to seek alternative sources. They prefer their key suppliers not to be informed about their trade show participation to avoid possible trust issues. Facing these constraints, we decided to employ a dataset with buyers as our focal respondents.

4.2. Measurement

Established scales were used and modified to accommodate the research context. All self-reported scales were measured on 7-point Likert-type scales and are listed in Table 2. The psychic distance scale was derived from Katsikeas et al. (2009). The scales for information sharing, joint sense-making, and knowledge integration were modified from Selnes and Sallis (2003). The scales for firm exploration were adapted from He and Wong (2004), and Li and Huang (2012). The asset specificity scale was adapted from Katsikeas et al. (2009), and Heide and John (1990).

In line with the relationship learning perspective, we controlled for technological uncertainty and performance ambiguities in our model (Cheung et al., 2010; Geyskens, Steenkamp, & Kumar, 2006; Selnes & Sallis, 2003). The technological uncertainty scale was derived from John and Weitz (1988). We employed performance ambiguity scales from Stump and Heide (1996). We also controlled for the sales amount in the previous accounting year, relationship age (years), firm size (employee number), and importance of the relationship (the buyer's procurement from the seller as a percentage of the buyer's overall procurement in the last accounting year).

4.3. Data analysis

We employed the structural equation modeling (SEM) method for analysis. The two-step analysis procedure, recommended by Anderson and Gerbing (1988), was used in the current study to examine the hypothesized effects of our framework. We first employed confirmatory factor analysis (CFA) to assess the goodness of fit, composite reliability, and construct validity in the measurement model. The full structural equation model was then evaluated to test the hypotheses.

To test for the moderation effect, we employed both the Latent Moderated Structural Equations (LMS) (Klein & Moosbrugger, 2000), as well as the refined orthogonal approach (i.e., the double-mean-centered and residual-centered product term), to conduct our analysis. LMS takes the non-normality of latent interaction in SEM into account and develops the approximate maximum likelihood estimator. LMS uses full-information that offers higher statistical power than alternative limited-information approaches, such as two-group analysis (Klein & Moosbrugger, 2000; Muthén & Asparouhov, 2003). Indeed, Little, Bovaird, and Widaman (2006) offer systematic examinations to demonstrate that, in SEM analyses, LMS gives a better model fit than traditional orthogonalized methods (ex: product-terms) to examine the moderation effects. We used Mplus 8.0 to conduct CFA, LMS, and CFA marker analyses. For the refined orthogonal approach and follow-up robustness checks, we employed the 'lavaan,' 'semTools,' and

Table 2
Scales, Reliability, and Convergent Validity.

Constructs & Scales	Standardized Estimates	AVE	CR
Construct: Psychic Distance		0.6144	0.8878
The degree of dissimilarity in the parties' operating environments for each item was anchored by "highly similar = 1" and "highly different = 7."			
PD1. Culture (traditions, values, language)	0.669		
PD2. Accepted business practices	0.833		
PD3. Economic environment	0.838		
PD4. Legal system	0.826		
PD5. Communication infrastructure	0.741		
Construct: Information Sharing		0.5808	0.8052
Regarding this relationship…(highly disagree = "1", highly agree = "7")			
IE1. Our companies exchange information related to changes in end-user needs, preferences, and behavior.	0.809		
IE2. Our companies exchange information related to changes in market structure, such as mergers, acquisitions, or partnering.	0.79		
IE3. Our companies exchange information as soon as possible of any unexpected problems.	0.681		
Construct: Joint Sense-Making		0.5523	0.7112
JS1. It is common to establish joint teams to analyze and discuss strategic issues.	0.774		
JS2. We have a lot of face-to-face communication in this relationship.	0.711		
JS3. The atmosphere in the relationship stimulates productive discussion encompassing a variety of opinions. [d]	–		
Construct: Knowledge Integration		0.7775	0.8747
KI1. In the relationship, we frequently adjust our common understanding of end-user needs, preferences, and behavior.	0.902		
KI2. In the relationship, we frequently adjust our common understanding of trends in technology related to our business.	0.861		
KI3. We frequently evaluate and, if needed, update information about the relationship stored in our electronic databases. [d]	–		
Construct: Asset Specificity		0.7118	0.8806
Regarding this relationship…(highly disagree = "1", highly agree = "7")			
AS1. We have made extensive internal adjustments in order to deal effectively with this supplier.	0.792		
AS2. We have made extensive internal adjustments in order to deal effectively with this supplier.	0.819		
AS3. Our firm has made substantial commitments of time and money in training our people to deal with this supplier.	0.915		
Construct: Firm Exploration		0.5352	0.7738
Regarding your firm in the past three years, please indicate agreement with the left statement in each pair with a rating of 1 and agreement with the right statement with a rating of 7.			
EP1. We increase economies of scale in **existing** markets. / We frequently utilize **new** opportunities in new markets.	0.626		
EP2. Our organization improves current product development / Our organization acquires product	0.784		

Table 2 (*continued*)

Constructs & Scales		Standardized Estimates	AVE	CR
processes and skills **existing** in our firm	development skills and processes entirely **new** to our firm.			
EP3 We improve our provision's efficiency of products and services.	We commercialize products and services that are completely **new** to our organization.	0.774		
Construct: Technological Uncertainty [c]			0.6255	0.8336
In recent 2-3 years, this product market has been…(*please indicate agreement with the left statement in each pair with a rating of 1 and agreement with the right statement with a rating of 7.*)				
TU1. Easy to Monitor Trends	Difficult to Monitor Trends	0.769		
TU2. Stable market shares	Volatile market shares	0.814		
TU3. Accurate Sales Forecasts	Inaccurate Sales Forecasts	0.790		
Construct: Performance Ambiguity [c]			0.6739	0.8039
Regarding the Supplier's Performance…… (*highly disagree* = "1", *highly agree* = "7")				
PA1. This supplier is performing so many different tasks that it is difficult to ascertain whether a good job is being done.		0.746		
PA2. It is difficult to determine whether agreed-upon quality standards and specifications are adhered to.		0.888		

Goodness-of-fit: Chi-square = 400.857 (df = 262), RMSEA = 0.052, CFI = 0.937, SRMR = 0.051. d: Items deleted for low loadings. c control variables.

'MIIVsem' packages in R.

5. Results

5.1. The measurement model

We summarized composite reliability (CR) and average value extracted (AVE) to evaluate the internal consistency of the constructs. As presented in Table 1, the CR and AVE values for all constructs in the research model are satisfactory (Fornell & Larcker, 1981; Hair, Black, Babin, & Anderson, 2009). Furthermore, we checked the convergent validity by examining the significance of item loadings. The results show

that item loadings are significant (see Table 1), thereby supporting satisfactory convergent validity (Hair et al., 2009). The goodness-of-fit statistics for the CFA are also satisfactory (RMSEA = 0.052, CFI = 0.937, SRMR = 0.051) (Hu & Bentler, 1998).

We then performed two tests to evaluate discriminant validity. First, as Fornell and Larcker (1981) suggested, discriminant validity can be determined by whether the square root of AVE for each construct exceeds the correlations between construct pairs. The results, in Table 3, demonstrate that the square root of AVE is higher than the pairwise correlation coefficients for each construct, implying satisfactory discriminant validity. In the second test, discriminant validity is determined by whether the confidence interval of the correlations between the two latent constructs includes 1 (Bagozzi & Yi, 1988). Among our pairwise correlations in CFA, no confidence interval includes 1. These results provide support for the discriminant validity of our measures.

5.2. Structural model and hypothesis testing

We followed the procedure suggested by Klein and Moosbrugger (2000) to conduct our analysis. First, we checked the model with only the main effect hypothesis as the baseline model, using traditional SEM (Model 1 in Table 4). Subsequently, we added the moderation path to the baseline model to check if adding a moderator increases statistical rigor. In Model 1, we included the focal moderators – firm exploration and asset specificity– as the control variables. The goodness-of-fit statistics to Model 1 show a satisfactory fit with CFI = 0.929, SRMR = 0.062, and RMSEA = 0.053 (Hu & Bentler, 1999).

Next, we built the LMS moderation model (Model 2 in Table 4). Because LMS does not offer traditional goodness-of-fit statistics in SEM, we followed the criteria offered by Klein and Moosbrugger (2000) and Muthén and Asparouhov (2003, 2015) to evaluate the rigor of Model 2. We found Model 2 to be more statistically robust than Model 1 because the significance of the moderation hypothesis (H2a, H2b. and H3c) suggests the essentiality of adding the moderating path. In addition, the statistics for Akaike's Information Criterion (AIC) and Bayesian Information Criterion (BIC) are lower after adding the moderator to the baseline model (Akaike, 1973; Little et al., 2006; Schwarz, 1978). Following the model selection procedure of Little et al. (2006), and Muthén and Asparouhov (2015), we found Model 2 to be more robust than Model 1.

The results of our hypothesis testing are summarized in Model 1 and Model 2. The results of Model 1 supported H1, the proposition that psychic distance would undermine all aspects ofrelationship learning (H1a: beta = -0.239, p = 0.003; H1b: beta = -0.174, p = 0.041; H1c: beta = -0.201, p = 0.009). Surprisingly, H2, which proposes that firm exploration mitigates the detriments from psychic distance on relationship learning aspects, is partially supported in Model 2 (H2a: beta = 0.246, p = 0.038; H2b: beta = 0.189, p = 0.036; H2c: beta = 0.139, p = 0.314). It shows firm exploration resolves psychic distance challenge in information sharing and joint sense-making but does not address this

Table 3
Correlation Matrix and Discriminant Validity.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Psychic Distance	**0.784**											
2 Information Sharing	−0.376	**0.762**										
3 Joint Sense-Making	−0.383	0.726	**0.732**									
4 Knowledge Integration	−0.348	0.695	0.715	**0.882**								
5 Firm Exploration	0.091	−0.082	−0.247	−0.251	**0.732**							
6 Asset Specificity	−0.361	0.503	0.596	0.517	−0.140	**0.842**						
7 Technological Uncertainty	0.023	−0.032	0.031	0.067	−0.174	−0.091	**0.791**					
8 Performance Ambiguity	−0.051	−0.005	0.156	0.155	−0.081	0.181	0.291	**0.821**				
9 Firm Age	−0.04	−0.069	−0.094	−0.097	0.159	−0.064	−0.141	−0.024	−			
10 Firm Size (Employee No.)	0.075	−0.157	0.057	−0.103	0.043	−0.034	−0.013	−0.098	0.084	−		
11 Importance of the Relationship	−0.145	0.036	0.296	0.066	−0.104	0.133	−0.065	−0.141	0.027	0.239	−	
12 Sales	−0.064	0.007	0.145	−0.030	−0.003	0.007	−0.13	−0.018	0.200	0.408	0.433	−

Note: On the diagonal is the square root of AVE.

Table 4
Results of Hypothesis Testing & Structural Model.

	Model1 Beta (t-value)	Model2
Controls		
Technological Uncertainty -> Information Sharing	0.089 (1.043)	0.077 (0.821)
Performance Ambiguity-> Information Sharing	−0.150 (-1.733)	−0.175* (-2.038)
Firm Age -> Information Sharing	−0.034 (-0.467)	−0.046 (-0.442)
Firm Size -> Information Sharing	−0.164* (-2.088)	−0.223** (-2.659)
Importance of the Relationship -> Information Sharing	−0.05 (-0.621)	−0.019 (-0.21)
Sales -> Information Sharing	0.094 (1.100)	0.14 (1.671)
Exploration-> Information Sharing	−0.016 (-0.181)	0.004 (0.038)
Asset Specificity-> Information Sharing	0.43** (5.405)	0.415** (4.618)
Technological Uncertainty -> Joint Sense-Making	0.051 (0.572)	0.037 (0.38)
Performance Ambiguity-> Joint Sense-Making	0.045 (0.480)	0.033 (0.285)
Firm Age -> Joint Sense-Making	−0.053 (-0.692)	−0.059 (-0.687)
Firm Size -> Joint Sense-Making	0.03 (0.366)	−0.01 (-0.227)
Importance of the Relationship -> Joint Sense-Making	0.182* (2.068)	0.204* (2.33)
Sales -> Joint Sense-Making	0.061 (0.684)	0.097 (1.221)
Exploration-> Joint Sense-Making	−0.173 (-1.937)	−0.158 (-1.733)
Asset Specificity-> Joint Sense-Making	0.48** (5.716)	0.47** (4.456)
Technological Uncertainty -> Knowledge Integration	0.082 (1.017)	0.092 (1.231)
Performance Ambiguity-> Knowledge Integration	−0.002 (-0.025)	−0.007 (-0.081)
Firm Age -> Knowledge Integration	−0.043 (-0.618)	−0.065 (-0.621)
Firm Size -> Knowledge Integration	−0.068 (-0.833)	0.028 (0.315)
Importance of the Relationship -> Knowledge Integration	0.018 (0.237)	0.048 (0.600
Sales -> Knowledge Integration	−0.001 (-0.012)	0.140 (1.678)
Exploration-> Knowledge Integration	−0.188* (-2.280)	−0.184 (-1.809)
Asset Specificity-> Knowledge Integration	0.409** (5.398)	0.399** (4.688)
Hypothesized Paths		
Psychic Distance -> Information Sharing (H1a)	−0.239** (-2.948)	−0.204* (-2.204)
Psychic Distance -> Joint Sense-Making (H1b)	−0.174* (-2.049)	−0.156 (-1.653)
Psychic Distance -> Knowledge Integration (H1c)	−0.201** (-2.612)	−0.162 (-1.851)
Psychic Distance* Firm Exploration-> Information Sharing (H2a)		0.246* (2.070)
Psychic Distance* Firm Exploration-> Joint Sense-Making (H2b)		0.189* (2.099)
Psychic Distance* Firm Exploration-> Knowledge Integration (H2c)		0.139 (0.805)
Psychic Distance* Asset Specificity-> Information Sharing (H3a)		0.136 (1.542)
Psychic Distance* Asset Specificity -> Joint Sense-Making (H3b)		0.066 (1.008)
Psychic Distance* Asset Specificity -> Knowledge Integration (H3c)		0.172* (1.98)
Model Goodness-of-Fit Statistics		
Chi-square (df)	432.717 (282)	
CFA	0.929	
RMSEA	0.053	
SRMR	0.062	
AIC	14336.572	14335.606
2593Adjusted BIC	14344.662	14344.142

Note: *: significant at alpha = 0.05. **: significant at alpha = 0.01 (two-tailed). Following the criteria offered by Muthén and Asparouhov (2015), the LMS moderation model (Model2) offers more statistical rigor than the baseline model (Model1), because (1) the interaction effect hypothesis (H2) is significant, (2) the moderation model gives the lower AIC and adjusted BIC, and (3) the traditional orthogonal product-term model show similar results as the LMS.

issue in knowledge integration. Likewise, Model 2 also indicates that H3 asset specificity would lessen psychic distance challenge in relationship learning, is partially supported (H3a: beta = 0.136, p = 0.123; H3b: beta = 0.066, p = 0.421; H3c: beta = 0.172, p = 0.045). Asset specificity creates a favorable condition that resolves the psychic distance problem in knowledge integration, but asset specificity does not address the psychic distance issue in information sharing or joint sense-making.

5.3. Common method variance

We conducted multiple tests to post-check common method variance (CMV). We began with Harman's single factor analysis, exploratory factor analysis (EFA), and CFA to post-check for common method variance (CMV) in our sample (Chang, van Witteloostuijn, & Eden, 2010; Podsakoff & Organ, 1986; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Sharma, Yetton, & Crawford, 2009). The non-rotated single factor explains only 26 % of the variance, and EFA and CFA show no unaddressed factor in correlations with our focal factors. The results of Harman's test suggest our findings are not influenced by CMV.

Indeed, we used the CFA-marker technique to verify that our results are not altered by CMV threats. Building on the initial CFA marker procedure from Lindell and Whitney (2001) and Williams, Hartman, and Cavazotte (2010) suggest a multiple-step procedure to: (1) establish the association of the marker variable with another variable before the marker test; (2) give a comprehensive examination on different sources of CMV threats (Simmering, Fuller, Richardson, Ocal, & Atinc, 2015; Williams & O'Boyle, 2015). We employed the Williams et al. (2010) approach and offered the results in Table 5.

Following the Williams et al. (2010) procedures, we conducted the following four nested SEM models to examine the common method variance: CFA model, Baseline model, Method-Constrained model, and the Method-Unconstrained model. In the CFA model, we had all the indicators loaded on their latents, and all the coefficients were estimated freely. Then, in the baseline model, we fixed the loadings and errors of the market latent with the value obtained in the CFA model, and fixed

Table 5
Marker Test for CMV Post Check.

Model	χ^2	Df	CFI
CFA	417.093	288	0.944
Baseline	429.100	303	0.945
Method-Constrained	428.927	302	0.945
Method-Unconstrained	401.656	280	0.947
χ^2 **Comparison Results**	Δ χ^2	Δ df	χ^2 **Critical Value**
Baseline vs Method-C	0.173	1	3.841
Method-C vs Method-U	27.271	22	33.924

CFA Marker Scales
Please evaluate the importance of the following objectives for your attendance to this trade show (7 point strongly-disagree to strongly-agree scale, adapted from Godar and O'Connor (2001))
1 Collect information about new products/developments in the industry.
2 Collect information about competitors' prices, products, and strategies.
3 To compare products or services
4 Collect information in general.

Note: The model inequivalence test between baseline and method-constrained models is not significant, indicating method variance does not significantly alter the results. Indeed, the insignificant inequivalence between method-constrained and method-unconstrained models further support that neither congeneric nor non-congeneric method variance creates significant threats to our results.

the structural path of the marker latent to the other focal latents to zero. In the Method-Constrained model, the marker is loaded on every other latents with the fixed loading (constrained). Finally, the Method-Unconstrained model is identical to the Method-Constrained model, except for that the loadings of marker variable items to other latents are estimated freely (unconstrained).

According to the criteria of Williams et al. (2010), our CFA marker technique results suggest that CMV is not a significant threat. First, the CFI statistics among the CFA, Baseline, Method-Constrained, and Method-Constrained models do not show significant differences. Second, the chi-square test for the model difference between the Baseline and Model-Constrained model is not significant. Finally, the insignificance of the chi-square test between Model-Constrained and Model-Unconstrained model indicates that our results are not biased by non-congeneric CMV. Hence, we conclude there is no significant CMV problem in the results.

5.4. MIIV-2SLS: post checking the model misspecification and endogeneity

To check if our results are biased from endogeneity, such as omitting important variables or reverse causality, we employed the Model Implied Instrument Variable estimation using Two-Stage Least Square (MIIV-2SLS) approach in SEM for the robustness check (Bollen & Bauer, 2004; Bollen, 1996, 2019; Bollen, Kolenikov, & Bauldry, 2014).

The MIIV-2SLS approach takes advantage of the multiple-indicator nature of SEM and generates instruments from observed variables within the model (Bollen et al., 2014). The observed variables uncorrelated with equation disturbance performs the equivalent function as the external instrument variables for post-checking endogeneity (Bollen, 1996). The method's robustness has been illustrated by multiple studies (Bollen et al., 2014; Bollen, Gates, & Fisher, 2018; Bollen, 2019). Because the Two-Stage Least Squares (2SLS) estimator is asymptotically distribution-free, MIIV-2SLS permits estimation and testing for the latent variable model and any other subset of equations. The method provides equation-based overidentification tests that can help pinpoint model misspecifications (Bollen et al., 2018; Bollen, 2019).

Following the procedure in (Bollen, 2019), we conducted a five-step MIIV-2SLS analysis. First, we used the orthogonal product-term model in our robustness test, as the MIIV-2SLS for LMX is not available due to concurrent technical constraints. The product-term is residual-centered for improving the goodness-of-fit. Second, we conducted the latents to observed variables transformation. Third, after the transformation, we identified the model implied instrument variables (MIIVs) that are not directly or indirectly correlated with equation errors. Fourth, we followed Bollen (1996) and conducted a full-information SEM model using 2SLS estimation by returning the MIIVs back into the model, with a bootstrapping number equal to 1,000. Finally, we conducted the Sargan test on structural paths to examine if MIIVs are correlated with an error. In Table 6, the Sargan statistics are not significant at alpha = 0.05, indicating that the correlated errors do not significantly bias the estimates in the model. Therefore, our MIIV-2SLS check shows insignificant threats from endogeneity of model misspecification.

6. Discussion

A surprising but interesting finding is that our H2 and H3 are only partially supported. The results suggest that, in relationship learning, firm exploration and asset specificity provide different and complementing functions to address psychic distance. Firm exploration addresses psychic distance in information sharing and joint sense-making but does not resolve the issue in knowledge integration. In contrast, asset specificity resolves the challenge of psychic distance in knowledge integration but does not address the issue in either information sharing or joint sense-making.

A plausible explanation could be that, to overcome psychic distance,

Table 6

Model Implied Instrument Variable estimation using Two-Stage Least Squares (MIIV-2SLS).

Structural	Estimates	Z-Value	P>|Z|	Sargan	df	P(Chi-Square)
Information Sharing				37.68	28	0.105
r.o. Psychic Distance (H1a)	−0.608**	−2.569	0.01			
r.o. Psychic Distance*Firm Exploration (H2a)	0.091*	2.052	0.04			
r.o. Psychic Distance*Asset Specificity (H3a)	0.076	1.813	0.07			
r.o. Firm Exploration	−0.253*	−2.078	0.038			
r.o. Asset Specificity	0.04	0.327	0.744			
r.o. Technological Uncertainty (control)	0.084	0.935	0.35			
r.o. Performance Ambiguity (control)	−0.151	−1.807	0.071			
r.o. Firm Age (control)	−0.01	−0.765	0.444			
r.o. Employee No (control)	−0.034	−0.205	0.838			
r.o. Importance of the Relationship (control)	0.063	0.283	0.777			
r.o. Sales (control)	−0.008	−0.034	0.973			
Joint Sense-Making				34.722	28	0.178
r.o. Psychic Distance (H1b)	−0.627*	−1.995	0.046			
r.o. Psychic Distance*Firm Exploration (H2b)	0.163**	2.749	0.006			
r.o. Psychic Distance*Asset Specificity (H3b)	0.025	0.438	0.662			
r.o. Firm Exploration	−0.44**	−2.725	0.006			
r.o. Asset Specificity	0.095	0.577	0.564			
r.o. Technological Uncertainty (control)	−0.066	−0.549	0.583			
r.o. Performance Ambiguity (control)	0.248*	2.233	0.026			
r.o. Firm Age (control)	−0.018	−1.104	0.27			
r.o. Employee No (control)	−0.272	−1.244	0.214			
r.o. Importance of the Relationship (control)	0.625*	2.162	0.031			
r.o. Sales (control)	−0.258	−0.541	0.400			
Knowledge Integration				35.841	28	0.147
r.o. Psychic Distance (H1c)	−0.825**	−3.741	0.000			
r.o. Psychic Distance*Firm	0.073	1.759	0.079			

Table 6 (*continued*)

Structural	Estimates	Z-Value	P>|Z|	Sargan	df	P(Chi-Square)
Exploration (H2c)						
r.o. Psychic Distance*Asset Specificity (H3c)	0.112**	2.859	0.004			
r.o. Firm Exploration	−0.199	−1.757	0.079			
r.o. Asset Specificity	0.002	0.022	0.983			
r.o. Technological Uncertainty (control)	0.04	0.477	0.633			
r.o. Performance Ambiguity (control)	0.102	1.312	0.19			
r.o. Firm Age (control)	−0.027*	−2.284	0.022			
r.o. Employee No (control)	−0.518**	−3.381	0.001			
r.o. Importance of the Relationship (control)	0.165	0.811	0.417			
r.o. Sales (control)	0.101	0.468	0.64			

Note: r.o. = being regressed on. The insignificance of the Sargan Chi-square tests shows our results of the structural model is robust from the threats of model misspecifications, such as omitting important variables or reverse causality (Bollen, 1996, 2019).

relationship learning at different levels require different contextual management. Information sharing, joint sense-making, and knowledge integration represent different relationship learning levels (Selnes & Sallis, 2003). Our findings suggest that, to overcome psychic distance in achieving early-level (information sharing) and mid-level (joint sense-making) relationship learning, it is important to have an explorative firm with an inclusive attitude that appreciates the novel practices from the foreign partner. Firm exploration implies openness and inclusiveness when facing unfamiliar practices (March, 1991; Stahl & Tung, 2015). These exploration traits benefit the relationship dynamics to build a welcoming climate for information sharing, as well as an open environment to exchange views and ideas that shape joint sense-making.

In addition, knowledge integration is a high-level aspect of relationship learning with continued updates and reinforcement of mutual understanding (Selnes & Sallis, 2003). To address psychic distance in high-level learning of knowledge integration, the openness and inclusiveness brought by firm exploration might not be sufficient. More proactive actions and commitments are need for such high-level learning. These rationales justify the unsupported path of H2c.

We identify the role of asset specificity to overcome psychic distance in knowledge integration. Asset specificity is a credible action to draw substantial and solid effects into the relationship (Liu et al., 2018). Our findings show that asset specificity addresses opportunism and motivation problems arising from psychic distance by better engaging both parties in knowledge integration (H3c). A possible reason for the unsupported H3a and H3b could be that there are more efficient approaches to resolving the psychic distance challenge at the early- and mid-level aspects of relationship learning (information sharing and joint sense-making) than asset specificity. Before a firm commits asset specificity to the relationship, the psychic distance problem in information sharing and joint sense-making is likely to be addressed through other relatively efficient approaches.

Another interesting finding is the direct effect of firm exploration. Although we do not hypothesize these paths in our research framework, it is surprising that the controlled paths of firm exploration on

relationship learning dimensions are either insignificant or negative. We argue that these surprising results could arise from the tradeoff between exploitation and exploration. Exploitative firms accumulate specialized knowledge stock within a specific business domain (Khan et al., 2019; March, 1991). The specialized knowledge stock of exploitative firms might facilitate the motivations for knowledge integration with global partners in the same area. These rationales are likely in our research context, because we collected our data from companies within the same industry (electronic). The electronic industry is also known for its highly specialized value chain across the globe (Jean, Sinkovics, Cavusgil et al., 2010; Kang et al., 2009). Such an industrial environment also drives exploitative firms to develop relationship learning with global stakeholders.

This study offers clarifications for two theoretical issues. First, our findings extend the literature of psychic distance. The role of psychic distance is widely discussed in internationalization, global alliances, and international networking (Coviello, Kano, & Liesch, 2017; Johanson & Vahlne, 1977, 2009). However, despite its prevalence, the exact mechanisms of how psychic distance affects international buyer-seller relationships is not fully understood. Our results provide insights into an aspect of relationship learning that links psychic distance with information sharing, joint sense-making, and knowledge integration. Second, we shed light on the psychic distance paradox (Evans & Mavondo, 2002; O'Grady & Lane, 1996). Our results reveal that the paradox may be attributable to the heterogeneity of contexts. These results provide insights into the contextual factors in understanding the link between psychic distance and learning. Our study offers both theoretical contributions and managerial implications, which we discuss in the following section.

6.1. Theoretical contributions

Our results provide multiple theoretical contributions. First, we clarify the link between psychic distance and learning at the relationship level. A recent review of psychic distance noted that: "not only goods and money are exchanged in relationships, but knowledge is as well – interactive learning is essential in any relationship (page 4; Vahlne and Johanson (2017))." Our study provides an important contribution to these discussions. We find relationship learning theory to be a contextualized angle that better understand psychic distance in international buyer-seller relationships. Indeed, our findings reveal that psychic distance undermines all relationship learning aspects in this context. Prior studies found that learning mechanisms vary between within an organization and across organizational boundaries (Holmqvist, 2003; Knight, 2002; Lane & Lubatkin, 1998; Powell et al., 1996). Accordingly, our lens addresses a void of applying the psychic distance theory in international buyer-seller relationships — the lack of attention to contextualized learning mechanisms. A comprehensive analysis of information sharing, joint sense-making, and knowledge integration shows that psychic distance challenge is significant for learning at the relationship-level. This study offers a vital examination into the boundary condition of the theoretical premise between psychic distance and learning in this context.

Secondly, we identified the contextual factors that help address psychic distance. We demonstrated the complementing functions of firm exploration and asset specificity in managing psychic distance. Our findings answer multiple calls from psychic distance paradox studies for more investigations into the heterogeneity of firms and contexts (Magnusson et al., 2014; O'Grady & Lane, 1996; Sinha et al., 2015). By breaking down relationship learning into early-level (information sharing), mid-level (joint sense-making), and high-level (knowledge integration), we showed that contextual factors matter at different levels of learning. These findings are noteworthy because they offer two critical implications. The first is that, in understanding the connection between psychic distance and learning, it is crucial to consider the multi-faceted nature of learning. Prior inconsistent findings regarding

psychic distance and learning could have resulted from insufficient considerations of learning at different levels. Another implication is that contextual factors might be an overlooked reason behind the inconclusive findings in the psychic distance paradox. With a focus on international buyer-seller relationships, this study outlines the roles of firm exploration and asset specificity at different levels of relationship learning. Our findings highlight that contextual factors could explain the mixed impacts of psychic distance on learning. Therefore, we provide considerable insight into the psychic distance paradox through the cross-fertilization of associated perspectives.

Third, we extend the contemporary discussions on psychic distance. Whether the notion of psychic distance applies in the contemporary IB environment has been questioned by multiple studies (Coldwell & Joosub, 2018; Coviello et al., 2017; Forsgren, 2002). A stream of psychic distance research suggests putting focus on the liability of outsiderships (Johanson & Vahlne, 2009). Liability of outsiderships perspective contends that learning through a global business network is critical in addressing psychic distance across national boundaries (Johanson & Vahlne, 2009; Vahlne, Schweizer, & Johanson, 2012). In a way, this study offers an extension to the literature of liability-of-outsiderships. We demonstrate that, to overcome psychic distance, it matters not only *who* you connect with at the network-level but also *how* you connect with each of them at the dyadic-level. The findings indicate that psychic distance remains a critical challenge in developing learning practice at the dyadic relationship-level. It requires careful management of the relationship context to address this challenge. Hence, our results provide additional insights into the micro-foundation of liability of outsiderships.

Finally, we extend the relationship learning perspective by offering an examination at international context. Relationship learning refers to a deep collaboration with shared interpretation and joint understandings between buyers and sellers (Selnes & Sallis, 2003). Our results confirm the detriments of psychic distance in relationship learning. Indeed, we offer implications by demonstrating the contextual effects of firm exploration and asset specificity. The present analysis reveals that firm exploration addresses psychic distance in information sharing and joint sense-making. We show that Stahl and Tung (2015)'s conjectures that exploration overcomes cross-national differences applicable to relationship learning. Our findings also extend the understanding of asset specificity in this context. Prior studies suggest asset specificity is a crucial antecedent for relationship learning (Cheung et al., 2010; Jean, Sinkovics, Kim et al., 2010, 2017; Selnes & Sallis, 2003). We contribute to the relationship learning perspective by showing that, in international context, asset specificity creates a favorable condition for mitigating psychic distance challenge in knowledge integration. Our study answers the call from Aykol and Leonidou (2018), a meta-review on international buyer-seller relationships that urges for future studies on learning governance and management.

6.2. Managerial implications

The present study offers important implications for practitioners. First, our findings show that while psychic distance can be challenging in international buyer-seller relationships, it is rather manageable. Past studies have noted practitioners' awareness of the psychic distance challenge, which leads to a lack of joint reference points, common practices, or shared mindset in international partnerships (Johanson & Vahlne, 2009; Katsikeas et al., 2009; Obadia et al., 2015). Our results further imply that, when faced with these challenges, key account managers should be mindful of the context while coping with psychic distance. We find that firm exploration and asset specificity are critical contingencies in mitigating the psychic distance disadvantage. For managers to maintain and learn from their global business partnerships, it is essential to cultivate the exploration practice to achieve better information sharing and joint sense-making. For managers seeking knowledge integration with international partners, investing in asset

specificity is important in addressing the opportunism and motivation issues associated with higher-level learning routines and practices.

Further, this study offers critical implications for partner selection. The findings suggest that how well a company manages the psychic distance in international partnerships is dependent on firm exploration. Explorative firms should find psychic distance more manageable in building relationship-level learning. Before initiating global partnerships, managers should conduct due diligence on both company culture and practices when evaluating firm exploration (March, 1991), especially for partnerships between buyers and sellers with high psychic distance. Managers might benefit from our findings by understanding the associations between psychic distance, firm exploration, and relationship learning and taking these into consideration when selecting international business partners.

Finally, our findings provide implications for managers who seek to transition into the next phase in their international buyer-seller relationships. In addition to prior studies that suggest asset specificity cultivates trust and learning (Dwyer et al., 1987; Kang et al., 2009; Liu et al., 2018), this study demonstrates that asset specificity overcomes psychic distance in knowledge integration. Practitioners might find our results useful in furthering their global partnerships, especially when turning early- and mid-level relationship learning into higher-level knowledge integration. We demonstrated that relationships at different stages might require different managerial approaches to address the psychic distance issue.

6.3. Limitations and future research

The present study contributes to both theory and practice. Nevertheless, some research limitations ought to be acknowledged. These limitations also provide directions for future research. First, due to data availability constraints, we employed a cross-sectional approach so that the subjects finished the survey within a constrained time frame. Although we have examined and ruled out the endogeneity threats by MIIV-2SLS post checks (Bollen et al., 2014, 2018; Bollen, 2019), future research would benefit from the use of panel data. Such inquiries should examine the dynamic aspects of psychic distance, relationship learning, firm exploration, and asset specificity.

In addition, we collected data from international buyers to measure international buyer-seller relationships, an approach used in previous psychic distance studies (Evans, Mavondo, & Bridson, 2008; Katsikeas et al., 2009; O'Grady & Lane, 1996; Obadia et al., 2015), as well as past international buyer-seller relationship research (Cavusgil et al., 2004; Hallen & Wiedersheim-Paul, 1999; Liu et al., 2018). Although we verified that common method variance (CMV) is not significant with CFA marker technique (Williams et al., 2010; Williams & O'Boyle, 2015), future research could further replicate and verify our results with multiple respondents or secondary data. Future studies may employ dyadic data to examine and compare the levels of perceived psychic distance, firm exploration, and asset specificity between international buyers and sellers to further understand the psychic distance paradox.

Third, to highlight the role of relationship learning, this study is designed in the context of the volatile, fast-changing electronic industry. Future studies may explore the generalizability of findings in different industries and contexts.

Finally, while this study employs validated scales of psychic distance (Bello et al., 2010; Katsikeas et al., 2009), future studies might adopt other approaches to measure psychic distance. For example, it may be useful to cross-check our results with objective indicators or expanded items in measuring psychic distance (Dow & Karunaratna, 2006; Prime, Obadia, & Vida, 2009).

Acknowledgements

References

Akaike, H. (1973). *Information theory and an extension of the Maximum likelihood Principal*.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*(3), 411.

Andriopoulos, C., & Lewis, M. W. (2009). Exploitation-exploration tensions and organizational ambidexterity: Managing paradoxes of innovation. *Organization Science, 20*(4), 696–717.

Assadinia, S., Kadile, V., Gölgeci, I., & Boso, N. (2019). The effects of learning orientation and marketing programme planning on export performance: Paradoxical moderating role of psychic distance. *International Small Business Journal, 37*(5), 423–449.

Aykol, B., & Leonidou, L. C. (2018). Exporter-importer business relationships: Past empirical research and future directions. *International Business Review, 27*(5), 1007–1021.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science, 16*(1), 74–94.

Beeby, M., & Booth, C. (2000). *Networks and inter-organizational learning: A critical review*. The learning organization.

Bello, D. C., Chelariu, C., & Zhang, L. (2003). The antecedents and performance consequences of relationalism in export distribution channels. *Journal of Business Research, 56*(1), 1–16.

Bello, D. C., Katsikeas, C. S., & Robson, M. J. (2010). Does accommodating a self-serving partner in an international marketing alliance pay off? *Journal of Marketing, 74*(6), 77–93.

Benner, M. J., & Tripsas, M. (2012). The influence of prior industry affiliation on framing in nascent industries: The evolution of digital cameras. *Strategic Management Journal, 33*(3), 277–302.

Benner, M. J., & Tushman, M. L. (2003). Exploitation, exploration, and process management: The productivity dilemma revisited. *The Academy of Management Review, 28*(2), 238–256.

Bollen, K. A. (1996). An alternative two stage least squares (2SLS) estimator for latent variable equations. *Psychometrika, 61*(1), 109–121.

Bollen, K. A. (2019). Model implied instrumental variables (MIIVs): An alternative orientation to structural equation modeling. *Multivariate Behavioral Research, 54*(1), 31–46.

Bollen, K. A., & Bauer, D. J. (2004). Automating the selection of model-implied instrumental variables. *Sociological Methods & Research, 32*(4), 425–452.

Bollen, K. A., Gates, K. M., & Fisher, Z. (2018). Robustness conditions for MIIV-2SLS when the latent variable or measurement model is structurally misspecified. *Structural Equation Modeling: A Multidisciplinary Journal*, 1–12.

Bollen, K. A., Kolenikov, S., & Bauldry, S. (2014). Model-implied instrumental variable—Generalized method of moments (MIIV-GMM) estimators for latent variable models. *Psychometrika, 79*(1), 20–50.

Buckley, P. J., & Casson, M. (1976). *Thefutur of the multinational enterprise*. New York: The McMillan Company Buckley The Future of the Multinational Enterprise, 1976.

Carmeli, A., Zivan, I., Gomes, E., & Markman, G. D. (2017). Underlining micro socio-psychological mechanisms of buyer-supplier relationships: Implications for inter-organizational learning agility. *Human Resource Management Review*, Article 100577.

Cavusgil, S. T., Deligonul, S., & Zhang, C. (2004). Curbing foreign distributor opportunism: An examination of trust, contracts, and the legal environment in international channel relationships. *Journal of International Marketing, 12*(2), 7–27.

Chang, S.-J., van Witteloostuijn, A., & Eden, L. (2010). From the editors: Common method variance in international business research. *Journal of International Business Studies, 41*(2), 178–184.

Cheung, M.-S., Myers, M. B., & Mentzer, J. T. (2010). Does relationship learning lead to relationship value? A cross-national supply chain investigation. *Journal of Operations Management, 28*(6), 472–487.

Coldwell, D. A. L., & Joosub, T. (2018). The FDI psychic distance paradox: Myth or reality? *Journal of Business and Retail Management Research, 12*(2).

Conway, T., & Swift, J. S. (2000). International relationship marketing – The importance of psychic distance. *European Journal of Marketing, 34*(11/12), 1391–1414.

Coviello, N., Kano, L., & Liesch, P. W. (2017). Adapting the Uppsala model to a modern world: Macro-context and microfoundations. *Journal of International Business Studies, 48*(9), 1151–1164.

De Vita, G., Tekaya, A., & Wang, C. L. (2010). Asset specificity's impact on outsourcing relationship performance: A disaggregated analysis by buyer–Supplier asset specificity dimensions. *Journal of Business Research, 63*(7), 657–666.

Dinner, I. M., Kushwaha, T., & Steenkamp, J.-B. E. M. (2019). Psychic distance and performance of MNCs during marketing crises. *Journal of International Business Studies, 50*(3), 339–364.

Dow, D., & Karunaratna, A. (2006). Developing a multidimensional instrument to measure psychic distance stimuli. *Journal of International Business Studies, 37*(5), 578–602.

Durand, A., Turkina, E., & Robson, M. (2016). Psychic distance and country image in exporter–importer relationships. *Journal of International Marketing, 24*(3), 31–57.

Duysters, G., Lavie, D., Sabidussi, A., & Stettner, U. (2020). What drives exploration? Convergence and divergence of exploration tendencies among alliance partners and competitors. *The Academy of Management Journal, 63*(5), 1425–1454.

Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing buyer-seller relationships. *Journal of Marketing, 51*(2), 11–27.

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *The Academy of Management Review, 23*(4), 660–679.

Evans, J. (2011). 13 The role of psychic distance in international marketing strategy implementation. *Handbook of research in international marketing* (p. 267).

Evans, J., & Mavondo, F. T. (2002). Psychic distance and organizational performance: An empirical examination of international retailing operations. *Journal of International Business Studies, 33*(3), 515–532.

Evans, J., Mavondo, F. T., & Bridson, K. (2008). Psychic distance: Antecedents, retail strategy implications, and performance outcomes. *Journal of International Marketing, 16*(2), 32–63.

Fiol, C. M., & Lyles, M. A. (1985). Organizational learning. *The Academy of Management Review, 10*(4), 803–813.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 39–50.

Forsgren, M. (2002). The concept of learning in the Uppsala internationalization process model: A critical review. *International Business Review, 11*(3), 257–277.

Geyskens, I., Steenkamp, J.-B. E. M., & Kumar, N. (2006). Make, buy, or ally: A transaction cost theory meta-analysis. *The Academy of Management Journal, 49*(3), 519–543.

Godar, S. H., & O'Connor, P. J. (2001). Same time next year—Buyer trade show motives. *Industrial Marketing Management, 30*(1), 77–86.

Griffith, D. A., & Dimitrova, B. V. (2014). Business and cultural aspects of psychic distance and complementarity of capabilities in export relationships. *Journal of International Marketing, 22*(3), 50–67.

Gupta, A. K., Smith, K. G., & Shalley, C. E. (2006). The interplay between exploration and exploitation. *The Academy of Management Journal, 49*(4), 693–706.

Hair, Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate data analysis*.

Hallen, L., & Wiedershiem-Paul, F. (1999). Psychic distance and buyer-seller interaction. *The internationalization of the firm: A reader* (pp. 349–360). London: Thompson.

Hang, H., & Godley, A. (2014). Revisiting the psychic distance paradox: International retailing in China in the long run (1840–2005). *Business history and international business* (pp. 85–102). Routledge.

Haugland, S. A. (1999). Factors influencing the duration of international buyer–seller relationships. *Journal of Business Research, 46*(3), 273–280.

He, Z. L., & Wong, P. K. (2004). Exploration vs. exploitation: An empirical test of the ambidexterity hypothesis. *Organization Science, 15*(4), 481–494.

Heide, J. B., & John, G. (1990). Alliances in industrial purchasing: The determinants of joint action in buyer-supplier relationships. *Journal of Marketing Research*, 24–36.

Heide, J. B., & John, G. (1992). Do norms matter in marketing relationships? *Journal of Marketing*, 32–44.

Holmqvist, M. (2003). A dynamic model of intra-and interorganizational learning. *Organization Studies, 24*(1), 95–123.

Holmqvist, M. (2004). Experiential learning processes of exploitation and exploration within and between organizations: An empirical study of product development. *Organization Science, 15*(1), 70–81.

Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3*(4), 424.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1–55.

Jean, R. J., Chiou, J.-S., & Sinkovics, R. R. (2016). Interpartner learning, dependence asymmetry and radical innovation in customer-supplier relationships. *Journal of Business and Industrial Marketing, 31*(6), 732–742.

Jean, R. J., Kim, D., & Bello, D. C. (2017). Relationship-based product innovations: Evidence from the global supply chain. *Journal of Business Research, 80*, 127–140.

Jean, R. J. B., Kim, D., Chiou, J. S., & Calantone, R. (2018). Strategic orientations, joint learning, and innovation generation in international customer-supplier relationships. *International Business Review, 27*(4), 838–851.

Jean, R. J., Sinkovics, R. R., & Cavusgil, S. T. (2010). Enhancing international customer–supplier relationships through IT resources: A study of Taiwanese electronics suppliers. *Journal of International Business Studies, 41*(7), 1218–1239.

Jean, R. J., Sinkovics, R. R., & Kim, D. (2010). Drivers and performance outcomes of relationship learning for suppliers in cross-border customer-supplier relationships: The role of communication culture. *Journal of International Marketing, 18*(1), 63–85.

Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm-A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies, 8*(1), 23–32.

Johanson, J., & Vahlne, J. E. (1990). The mechanism of internationalisation. *International Marketing Review, 7*(4).

Johanson, J., & Vahlne, J. E. (2003). Business relationship learning and commitment in the internationalization process. *Journal of International Entrepreneurship, 1*(1), 83–101.

Johanson, J., & Vahlne, J. E. (2009). The Uppsala internationalization process model revisited: From liability of Foreignness to Liability of Outsidership. *Journal of International Business Studies, 40*(9), 1411–1431.

John, G., & Weitz, B. A. (1988). Forward integration into distribution: An empirical test of transaction cost analysis. *The Journal of Law Economics & Organization, 4*, 337.

Johnston, W. J., Khalil, S., Jain, M., & Cheng, J. M.-S. (2012). Determinants of joint action in international channels of distribution: The moderating role of psychic distance. *Journal of International Marketing, 20*(3), 34–49.

Johnston, W. J., Le, A. N. H., & Cheng, J. M.-S. (2018). A meta-analytic review of influence strategies in marketing channel relationships. *Journal of the Academy of Marketing Science, 46*(4), 674–702.

Kang, M. P., Mahoney, J. T., & Tan, D. (2009). Why firms make unilateral investments specific to other firms: The case of OEM suppliers. *Strategic Management Journal, 30*(2), 117–135.

Katsikeas, C. S., Skarmeas, D., & Bello, D. C. (2009). Developing successful trust-based international exchange relationships. *Journal of International Business Studies, 40*(1), 132–155.

Khalil, S. (2019). The performance implications of collaborative activities in international buyer–seller exchanges: A contingency approach. *Journal of Business and Industrial Marketing, 34*(4), 801–809.

Khan, Z., Lew, Y. K., & Marinova, S. (2019). Exploitative and exploratory innovations in emerging economies: The role of realized absorptive capacity and learning intent. *International Business Review, 28*(3), 499–512.

Kim, D., Cavusgil, S. T., & Cavusgil, E. (2013). Does IT alignment between supply chain partners enhance customer value creation? An empirical investigation. *Industrial Marketing Management, 42*(6), 880–889.

Klein, A., & Moosbrugger, H. (2000). Maximum likelihood estimation of latent interaction effects with the LMS method. *Psychometrika, 65*(4), 457–474.

Knight, L. (2002). Network learning: Exploring learning by interorganizational networks. *Human Relations, 55*(4), 427–454.

Koza, M., & Lewin, A. (2000). Managing partnerships and strategic alliances: Raising the odds of success. *European Management Journal, 18*(2), 146–151.

Lado, A. A., Dant, R. R., & Tekleab, A. G. (2008). Trust-opportunism paradox, relationalism, and performance in interfirm relationships: Evidence from the retail industry. *Strategic Management Journal, 29*(4), 401–423.

Lane, P. J., & Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal,* 461–477.

Leonidou, L. C., Aykol, B., Fotiadis, T. A., Christodoulides, P., & Zeriti, A. (2017). Betrayal in international buyer-seller relationships: Its drivers and performance implications. *Journal of World Business, 52*(1), 28–44.

Leonidou, L. C., Palihawadana, D., Chari, S., & Leonidou, C. N. (2011). Drivers and outcomes of importer adaptation in international buyer–seller relationships. *Journal of World Business, 46*(4), 527–543.

Leonidou, L. C., Samiee, S., Aykol, B., & Talias, M. A. (2014). Antecedents and outcomes of exporter–importer relationship quality: Synthesis, meta-analysis, and directions for further research. *Journal of International Marketing, 22*(2), 21–46.

Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal, 14*(S2), 95–112.

Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology, 14*(1), 319–338.

Lew, Y. K., Sinkovics, R. R., & Kuivalainen, O. (2013). Upstream internationalization process: Roles of social capital in creating exploratory capability and market performance. *International Business Review, 22*(6), 1101–1120.

Li, Y.-H., & Huang, J.-W. (2012). Ambidexterity's mediating impact on product development proficiency and new product performance. *Industrial Marketing Management, 41*(7), 1125–1132.

Lindell, M. K., & Whitney, D. J. (2001). Accounting for common method variance in cross-sectional research designs. *The Journal of Applied Psychology, 86*(1), 114.

Little, T. D., Bovaird, J. A., & Widaman, K. F. (2006). On the merits of orthogonalizing powered and product terms: Implications for modeling interactions among latent variables. *Structural Equation Modeling, 13*(4), 497–519.

Liu, C. L. (2012). An investigation of relationship learning in cross-border buyer–supplier relationships: The role of trust. *International Business Review, 21*(3), 311–327.

Liu, S. Y., Deligonul, S., Cavusgil, E., & Chiou, J. S. (2018). Always trust in old friends? Effects of reciprocity in bilateral asset specificity on trust in international B2B partnerships. *Journal of Business Research, 90*, 171–185.

Luo, Y. (2001). Dynamic capabilities in international expansion. *Journal of World Business, 35*(4), 355–378.

Luo, Y., & Peng, M. W. (1999). Learning to compete in a transition economy: Experience, environment, and performance. *Journal of International Business Studies, 30*(2), 269–295.

Luo, Y., & Tung, R. L. (2007). International expansion of emerging market enterprises: A springboard perspective. *Journal of International Business Studies, 38*(4), 481–498.

Maekelburger, B., Schwens, C., & Kabst, R. (2012). Asset specificity and foreign market entry mode choice of small and medium-sized enterprises: The moderating influence of knowledge safeguards and institutional safeguards. *Journal of International Business Studies, 43*(5), 458–476.

Magnusson, P., Schuster, A., & Taras, V. (2014). A process-based explanation of the psychic distance paradox: Evidence from global virtual teams. *Management International Review, 54*(3), 283–306.

March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science, 2*(1), 71–87.

Muthén, B., & Asparouhov, T. (2003). Modeling interactions between latent and observed continuous variables using maximum-likelihood estimation in Mplus. *Mplus Web Notes, 6*, 1–9.

Muthén, B., & Asparouhov, T. (2015). *Latent variable interactions*.

O'Grady, S., & Lane, H. W. (1996). The psychic distance paradox. *Journal of International Business Studies, 27*(2), 309–333.

Obadia, C., Bello, D. C., & Gilliland, D. I. (2015). Effect of exporter's incentives on foreign distributor's role performance. *Journal of International Business Studies, 46*(8), 960–983.

Palmatier, R. W., Dant, R. P., Grewal, D., & Evans, K. R. (2006). Factors influencing the effectiveness of relationship marketing: A meta-analysis. *Journal of Marketing, 70*(4), 136–153.

Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of Management, 12*(4), 531–544.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *The Journal of Applied Psychology, 88*(5), 879.

Powell, W. W., Koput, K. W., & Smith-Doerr, L. (1996). Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology. *Administrative Science Quarterly,* 116–145.

Prange, C., & Verdier, S. (2011). Dynamic capabilities, internationalization processes and performance. *Journal of World Business, 46*(1), 126–133.

Prashantham, S., & Floyd, S. W. (2012). Routine microprocesses and capability learning in international new ventures. *Journal of International Business Studies, 43*(6), 544–562.

Prime, N., Obadia, C., & Vida, I. (2009). Psychic distance in exporter–Importer relationships: A grounded theory approach. *International Business Review, 18*(2), 184–198.

Sachdev, H. J., & Bello, D. C. (2014). The effect of transaction cost antecedents on control mechanisms: Exporters' psychic distance and economic knowledge as moderators. *International Business Review, 23*(2), 440–454.

Schumpeter, J. A. (1934). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle* (Vol. 55). Transaction publishers.

Schwarz, G. (1978). Estimating the dimension of a model. *The Annals of Statistics, 6*(2), 461–464.

Selnes, F., & Sallis, J. (2003). Promoting relationship learning. *Journal of Marketing, 67*(3), 80–95.

Sharma, R., Yetton, P., & Crawford, J. (2009). Estimating the effect of common method variance: The method–method pair technique with an illustration from TAM research. *Applied Psychology, 86*(1), 114–121.

Simmering, M. J., Fuller, C. M., Richardson, H. A., Ocal, Y., & Atinc, G. M. (2015). Marker variable choice, reporting, and interpretation in the detection of common method variance: A review and demonstration. *Organizational Research Methods, 18*(3), 473–511.

Sinha, P., Wang, M., Scott-Kennel, J., & Gibb, J. (2015). Paradoxes of psychic distance and market entry by software INVs. *European Business Review, 27*(1), 34–59.

Skarmeas, D., Katsikeas, C. S., Spyropoulou, S., & Salehi-Sangari, E. (2008). Market and supplier characteristics driving distributor relationship quality in international marketing channels of industrial products. *Industrial Marketing Management, 37*(1), 23–36.

Skarmeas, D., Zeriti, A., & Baltas, G. (2016). Relationship value: Drivers and outcomes in international marketing channels. *Journal of International Marketing, 24*(1), 22–40.

Sousa, C. M. P., & Bradley, F. (2006). Cultural distance and psychic distance: two peas in a pod? *Journal of International Marketing, 14*(1), 49–70.

Stahl, G. K., & Tung, R. L. (2015). Towards a more balanced treatment of culture in international business studies: The need for positive cross-cultural scholarship. *Journal of International Business Studies, 46*(4), 391–414.

Stahl, G. K., Tung, R. L., Kostova, T., & Zellmer-Bruhn, M. (2016). *Widening the lens: Rethinking distance, diversity, and foreignness in international business research through positive organizational scholarship.* Springer.

Stump, R. L., & Heide, J. B. (1996). Controlling supplier opportunism in industrial relationships. *Journal of Marketing Research (JMR), 33*(4).

Teagarden, M. B., Von Glinow, M. A., & Mellahi, K. (2018). Contextualizing international business research: Enhancing rigor and relevance. *Journal of World Business, 53*(3), 303–306.

Tung, R. L., & Stahl, G. K. (2018). The tortuous evolution of the role of culture in IB research: What we know, what we don't know, and where we are headed. *Journal of International Business Studies, 49*(9), 1167–1189.

Vahlne, J.-E., & Johanson, J. (2017). From internationalization to evolution: The Uppsala model at 40 years. *Journal of International Business Studies, 48*(9), 1087–1102.

Vahlne, J.-E., Schweizer, R., & Johanson, J. (2012). Overcoming the liability of outsidership—The challenge of HQ of the global firm. *Journal of International Management, 18*(3), 224–232.

Welch, C. L., & Welch, L. S. (2009). Re-internationalisation: Exploration and conceptualisation. *International Business Review, 18*(6), 567–577.

Williams, L. J., & O'Boyle, E. H. (2015). Ideal, nonideal, and no-marker variables: The confirmatory factor analysis (CFA) marker technique works when it matters. *The Journal of Applied Psychology, 100*(5), 1579.

Williams, L. J., Hartman, N., & Cavazotte, F. (2010). Method variance and marker variables: A review and comprehensive CFA marker technique. *Organizational Research Methods, 13*(3), 477–514.

Williamson, O. E. (1979). Transaction-cost economics: The governance of contractual relations. *The Journal of Law & Economics,* 233–261.

Williamson, O. E. (1985). *The economic institute of capitalism, 9* p. 19). New York: The Free Press.

Yamin, M., & Sinkovics, R. R. (2006). Online internationalisation, psychic distance reduction and the virtuality trap. *International Business Review, 15*(4), 339–360.

Zaheer, S. (1995). Overcoming the liability of foreignness. *The Academy of Management Journal, 38*(2), 341–363.

Zhong, W., Su, C., Peng, J., & Yang, Z. (2017). Trust in interorganizational relationships: A meta-analytic integration. *Journal of Management, 43*(4), 1050–1075.

Zollo, M., Reuer, J. J., & Singh, H. (2002). Interorganizational routines and performance in strategic alliances. *Organization Science, 13*(6), 701–713.