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# **When do domestic alliances help ventures abroad? Direct and moderating effects from a learning perspective**

**Hana Milanov**

**Stephanie A. Fernhaber**

## **Abstract:**

While the importance of strategic alliances for new venture internationalization is well acknowledged, the effect of domestic partners remains less understood. Building on organizational learning theory's vicarious learning arguments, we suggest that internationally experienced domestic partners positively influence new ventures' international intensity. Moreover, acknowledging that ventures may have multiple learning sources, we argue that the effect is more pronounced when substituting for the lack of new ventures' top management teams' international experience, or when complementing the insights about foreign markets received from foreign alliance partners. The analysis of 194 publicly held new ventures largely supports our hypotheses.

**Keywords:** International entrepreneurship; Strategic alliances; Internationalization; Partner location; Organizational learning

## **1. Executive summary**

Learning is commonly acknowledged as critical to the internationalization process. For new ventures, that typically cannot leverage firm-level experiential learning, the prior experiences of the top management team (TMT) and inter-organizational relationships such as strategic alliances are important sources of internationalization knowledge. However, while much has been learned about foreign partnerships, existing evidence on consequences of domestic alliances for new venture internationalization is still emerging, with some studies even suggesting that domestic partners are a less relevant learning source for internationalization. This is rather surprising given organizational learning theory's vicarious learning arguments that suggest such relationships could provide an impetus for geographic expansion.

In this study, we seek to understand the conditions under which domestic alliances influence new venture internationalization. We first argue that looking beyond the network structure (such as count of alliances) into partners' attributes is important, and accordingly hypothesize that domestic partners' international experience is a key factor to consider in theorizing about learning sources' influence on new venture internationalization. Building further on the learning literature, we next suggest that concomitantly examining other learning sources available to a venture will offer important refinements to the model. Specifically, we highlight top management team's international experience and the number of foreign alliances as important contingencies in the model, where TMT's international experience will diminish, and foreign alliances enhance, the relationship between internationally experienced domestic alliances and new venture internationalization.

To test our theoretical insights, we studied 194 U.S. new ventures in computer equipment and communication industries that underwent an initial public offering (IPO) from 1995 through 2000. To enhance comparability of our results, we operationalize new venture internationalization as a percentage of total sales that the venture realized outside of the national borders. Consistent with our hypotheses, we found that internationally experienced domestic partners positively influence new venture international intensity, especially when compensating for lack of venture's top management team's internationalization knowledge or when complemented by the presence of foreign alliances in the venture's alliance portfolio. Our analyses also bore two interesting results: domestic alliances can decrease new venture international intensity when such partners are inexperienced abroad. Moreover, contrary to our expectations, we found that the absolute level of internationalization intensity is higher for the internationally inexperienced TMTs than for those TMTs with international experience, which suggests interesting avenues for future research examining interactions of learning sources for internationalization.

Considered together, our findings offer two primary contributions to the literature. First, in highlighting domestic partners' international experience as an important attribute, we are able to further refine the network perspective in explaining new venture internationalization. By expanding the purely structural view of alliances with partners' attributes we help reconcile some of the critiques of domestic partners as inappropriate learning sources for new venture internationalization. Second, building on the tenets of organizational learning allows us to consider when learning from internationally experienced domestic alliances can act as a good substitute for

aspiring internationalizing ventures, and in contrast, what alternative sources of learning can allow ventures to further leverage such relationships in internationalization.

In terms of practical implications, we encourage entrepreneurs to consider partner's international experience and broader composition of their alliance portfolios when adding domestic partners to their network. More generally, to the extent that internationalization is an important goal of the organization, attention should be paid concomitantly to TMT's international experience and the learning potential from alliance partnerships in order to uncover the synergies that help propel new ventures' efforts abroad.

## **2. Introduction**

Knowledge and learning have been frequently acknowledged as critical to the internationalization process (e.g. De Clercq et al., 2012 and Johanson and Vahlne, 2009). Unlike existing, multinational enterprises, new ventures are not able to leverage firm-level experiential learning that is gradually accrued as new markets are entered. Indeed, recent empirical evidence offers important insights (Bruneel et al., 2010) into new venture internationalization by showing that younger ventures are able to offset their lack of – or limited – firm-level experiential learning with learning through either the prior experiences of the top management team (also known as congenital learning) or through inter-organizational relationships (vicarious learning). In that regard, many new ventures have been observed to internationalize as a part of a network (Coviello, 2006 and Coviello and Munro, 1997), where strategic alliances serve a prominent role. The reliance on alliances is so critical that the term ‘liability of outsidership’ has been coined to describe the disadvantages resulting from internationalizing in the absence of an appropriate network (Johanson and Vahlne, 2009).

While much has been learned about the role of strategic alliances in new venture internationalization, the existing literature largely focuses on foreign partnerships (e.g. Leiblein and Reuer, 2004 and Oviatt and McDougall, 1995). This is rather surprising, as even early internationalization research offered qualitative suggestions that an organization's success in entering international markets was strongly influenced by relationships in domestic markets (Johanson and Mattsson, 1988). Moreover, according to organizational learning theory's vicarious learning arguments (De Clercq et al., 2012 and Lubatkin et al., 2001), domestic partners could play an important role in the new venture internationalization process, and along with (or in addition to) foreign partners, provide an impetus for geographic expansion (Preece et al., 1998).

Interestingly, the limited body of empirical studies that do exist have been unable to find support for the direct effect of domestic partnerships on various aspects of firm internationalization (Manolova et al., 2010, Wiklund and Shepherd, 2009 and Yu et al., 2011). Some studies have even suggested that domestic partners are a less relevant (Colombo et al., 2009) or a less reliable (Lu and Beamish, 2001) learning source for internationalization. A closer examination of these studies unveils two gaps in the literature that, taken together, inform our approach in answering the following research question: under what conditions do domestic alliances influence new venture internationalization?<sup>3</sup>

First, beyond the partner's geographic location, existing studies have tended to overlook the alliance partners' attributes. While the focus on network structure (such as mere existence or number of domestic alliances) is in line with much of the traditional network literature (e.g. Ahuja, 2000 and Baum et al., 2000), the value a firm actually derives from its partners is often a function of the general resources possessed by these partners (Zaheer and Bell, 2005). Accordingly, in theorizing about learning from domestic partners, we highlight the partner's international experience as a likely important differentiating factor in whether or not such partners influence new venture's international intensity (Yu et al., 2011).

A second gap relates to the importance of examining boundary conditions, as inferred from studies where the relationship between domestic partners and internationalization was only supported when moderating variables were present (Manolova et al., 2010 and Yu et al., 2011). Given the learning mechanisms that take place within alliances, we suggest that concomitantly examining other learning sources available to a venture may offer important refinements to the model. Building on recent literature (Bruneel et al., 2010 and De Clercq et al., 2012), we consider two learning sources that encompass much of new venture international learning as playing important moderating roles: the top management team's (TMT's) international experience and the number of foreign alliance partners. The extent to which learning via the internationally experienced domestic partners is already represented in the venture through the congenital learning of the TMT is likely to determine the need for such learning, and accordingly its marginal contributions to international intensity. Likewise, the extent to which learning via the internationally experienced domestic partners is complemented by the learning available through foreign partners is likely to help distinguish the degree to which domestic partners' international experience is applicable in informing a new venture's international opportunity exploitation and overall international intensity.

With this study, we aim to make two primary contributions. First, in highlighting domestic partners' international experience as an important attribute, we join recent research (Yu et al., 2011) and further refine the network perspective in explaining new venture internationalization. While our results largely supported the hypothesized positive effect of internationally experienced partners for new venture internationalization, an additional new insight stems from the non-hypothesized observed negative effect that such alliances can have for venture international intensity when partners are internationally inexperienced. In that sense, we contribute to the international entrepreneurship (IE) literature a shift in focus that recognizes that new ventures' international intensity is shaped by both advanced network structure (such as the number of alliances) and network alters' attributes (such as [lack-of] international experience). By expanding the purely structural view of alliances with partners' attributes we hope to reconcile some of the critiques of domestic partners as inappropriate learning sources for new venture internationalization (c.f. Colombo et al., 2009 and Lu and Beamish, 2001).

Second, building on the tenets of organizational learning allows us to consider when learning from internationally experienced domestic alliances can act as a good substitute for aspiring internationalizing ventures, and in contrast, what alternative sources of learning can allow ventures to further leverage such relationships in internationalization. Interestingly, while we find that

domestic partners' international experience is particularly beneficial for international intensity when compensating for ventures' TMT's lack of internationalization experience, our findings suggest that the absolute level of internationalization intensity is higher for the internationally inexperienced TMTs than for those TMTs with international experience. We therefore answer and extend the call to contribute to the recently started conversation in the IE literature that examines the interactions among different learning sources and boundary conditions of any single learning source in the internationalization process (Bruneel et al., 2010 and De Clercq et al., 2012). Finally, we join recent literature examining the role of partner location in internationalization (e.g. Al-Laham and Souitaris, 2008, Boehe, 2013, Lavie and Miller, 2008, Manolova et al., 2010 and Yu et al., 2011) and respond to calls for research to further examine partner location as a key alliance criterion in entrepreneurial literature (Bruneel et al., 2010 and Das and He, 2006).

### **3. Theory and hypotheses**

Learning is critical for internationalization because firms must “apprehend, share, and assimilate new knowledge in order to compete and grow in markets where they have no previous experience” (Autio et al., 2000: 911). The Uppsala model of internationalization has long recognized the criticality of such learning (Johanson and Vahlne, 1977 and Johanson and Vahlne, 1990). Yet, while early models largely assumed that learning is acquired experientially “mainly through operations abroad” (Johanson and Vahlne, 1977: 23), it was only more recently that the model was revisited in light of the growing reliance on alliances and networks to access necessary learning (Johanson and Vahlne, 2009).

Indeed, strategic alliances are today recognized and primarily studied as vehicles for learning (Inkpen and Tsang, 2007). This is largely motivated by the observation that even when alliances are not formed with a learning goal in mind, partners commonly acknowledge experiencing significant – even if not initially intended – knowledge transfer (Beamish and Berdrow, 2003). In the context of examining the impact of alliances on new venture internationalization, Oviatt and McDougall (2005) state that partnerships are important both for raising awareness by learning about international opportunities and also for accelerating internationalization by moving faster down the learning curve. In that sense, a recent study by Freeman et al. (2006) richly illustrates how initial alliances can serve as springboards to learning about new potential partnerships and partners' customers in foreign markets (“client followership”). Moreover, alliances as “learning vehicles” can help firms overcome different resource constraints and aid in compensating for either lack of market-specific or task-specific experiences (Khanna et al., 1998).

In the IE literature, while pronounced interest in foreign alliances provides for substantial evidence about their positive influence on firm internationalization (e.g. Lee and Park, 2006), studies of domestic partners are only recently receiving scholarly attention and cover contexts that vary from small Swedish firms (Wiklund and Shepherd, 2009) to public biotech ventures in the US (Yu et al., 2011). While sample differences, country effects, types of firms examined, or even alliance conceptualization and operationalization each plays a role in interpreting the current range of findings on domestic alliances (which cover a spectrum from non significant to negative direct effects), it is noteworthy to observe that with one exception (Yu et al., 2011), one plausible way to

align the diverse findings on domestic partnerships and their role in internationalization is to account for specific partner attributes relevant to internationalization.

For example, in a study of young technology firms, authors group both foreign and domestic alliances in one variable, and fail to find a significant relationship between the use of strategic alliances and international intensity (Preece et al., 1998). In another study theorizing that alliances between small Swedish firms and their domestic partners should allow for stronger knowledge transfers, domestic alliances did not significantly impact whether a new venture internationalized (Wiklund and Shepherd, 2009). At the other side of the spectrum, Lu and Beamish (2001) theorize and find that the number of domestic alliances will negatively influence internationalizing SME's performance, which authors argue is likely due to domestic partners' lack of knowledge on venture-targeted foreign country markets. Similarly, Colombo et al. (2009) subscribe to that argument and suggest that domestic partners are less relevant for internationalization given their lack of specific foreign-market insights. The interesting aspect of the latter two studies in particular is their implicit inclusion of partners' attribute (i.e. lack of knowledge of foreign markets) into the argument, which hints at the importance of accounting for domestic partners' international experience, especially when considering learning as one of the strategic alliances' primary outcomes. Indeed, recognizing partners' international experience as an important element in the learning mechanism might contribute to offset some of the trade-offs of domestic networks recognized in recent literature that warn that heavy involvement in local networks might diminish managerial resources for internationally oriented opportunities (Boehe, 2013).

### **3.1. Internationally experienced domestic alliances and new venture internationalization**

In defining knowledge transfer as the process through which one alliance partner is impacted by the experience of another (Inkpen and Tsang, 2005), the organizational learning literature implies that international experience is an important attribute to consider in examining domestic partners' potential to influence new venture internationalization. Indeed, because *'accumulated internationalization experience ... is not related to specific country markets...[but]... a firm-specific experience relevant to all markets.'* ( Eriksson et al., 1997: 352), domestic partners' international experience has the potential to be relevant to the new venture internationalization process (regardless of the specific foreign market being served) and affect it in meaningful ways.

Vicarious learning, one of the most studied processes in the literature on alliances (Tsang, 2002), is motivated by alliance partners' goals to absorb the deeply embedded knowledge from each other (Hamel, 1991). In the context of our study, because a minimum condition for the transfer of knowledge between partners often requires some level of empathy and familiarity (Baum and Ingram, 2002), ventures should be able to better identify (and empathize) with domestic partners who internationalized from the same country (Wiklund and Shepherd, 2009), in turn enhancing the conditions for transfer of internationalization knowledge. Indeed, sharing the home country's dominant logics of conducting business and empathizing about the challenges of internationalizing from the same country are likely to increase the relative absorptive capacity of domestic alliances (Lane and Lubatkin, 1998), which ultimately increases the efficiency of learning between partners. Hence, domestic partnerships represent especially powerful vehicles for new venture's learning about the intricate internationalization process that could help the venture appreciate better not

only the success factors but also the pitfalls in managing the process of internationalization from the perspective of the host country firm. Together, such learning is likely to allow better understanding of the process of evaluation of international opportunities and optimize the venture's process of international expansion, both contributing to international intensity.

An important (and possibly) unintended consequence of vicarious learning might be a venture's stronger confidence in internationalization. Specifically, lacking sufficient internationalization experience is likely accompanied by natural concerns about uncertainty and fear of the unknown (Erramili and Rao, 1990), or related to management's perceptions of the cost of internationalization (Eriksson et al., 1997). Having internationally experienced domestic partners should allow for stronger learning about the conduct of international business from these alliances and ultimately serve to boost ventures' confidence in internationalizing by allaying such aspects of process-related uncertainty (De Clercq et al., 2005) or lowering the perceived cost of serving foreign markets in general.

Finally, in addition to vicarious learning, internationally experienced domestic alliances may boost a venture's international intensity by providing a more direct learning experience and larger awareness of international opportunities. For example, technology development agreements involving a domestic partner with an international customer base may directly or indirectly “pull” the venture into interactions with foreign markets (Erramilli and Rao, 1990), which also indirectly increase awareness for international opportunities. In conclusion, the domestic partners' internationalization-related activities can open up different types of learning opportunities for the partnering new venture: from vicarious learning through observation, to more direct learning through introductions and interactions with domestic partners' foreign customers abroad. Hence, we hypothesize:

### **H1.**

The number of internationally experienced domestic alliance partners will be positively related to new venture international intensity.

### 3.2. Moderating effects

Extant empirical research testing the relationship between domestic networks and new venture internationalization offers insights into the importance of studying the boundary conditions of this relationship. For example, while Manolova et al. (2010) do not find a positive direct effect of an SME's domestic network on internationalization, they subsequently found that the relationship was moderated by the age of the venture, argued to represent accumulation of venture's internal experience. More closely related to this study, Yu et al. (2011) were unable to support a direct effect of domestic, internationally experienced marketing partners on biotech ventures' sooner initiation of foreign sales, yet confirmed that the relationship became visible when the network structure was more cohesive, allowing for facilitated communication and learning. The limited evidence thus far suggests the reoccurring notion that the importance of domestic partners for internationalization varies across certain cases or contexts, where experience- and learning-



boundary conditions play an important role (Bruneel et al., 2010 and De Clercq et al., 2012). Accordingly, we next consider the possibility that learning via new ventures' internationally experienced domestic alliance partners is likely to be deemed more valuable, and thus more influential, when concomitantly met with a need for such learning and/or with an opportunity to complement it with other sources and types of learning. Indeed, alliance literature has stipulated that the recognition of the need to learn from partners is a significant precursor of successful learning in alliances (Inkpen and Tsang, 2007). Similarly, learning is importantly determined by “the magnitude of the opportunities that each partner firm has to apply what it learns in the alliance to a context not governed by the alliance” (Khanna et al., 1998: 196).

### 3.2.1. Top management team's international experience

Prior literature provides exhaustive evidence about the influence of TMT's international experience on new venture internationalization (Bloodgood et al., 1996 and Shrader et al., 2000). As summarized by De Clercq et al. (2012) in their recent review of the literature, TMT international experience contributes to new venture internationalization largely due to (a) a greater awareness of international opportunities, (b) increased capability of assessing such opportunities and (c) a more favorable disposition to pursue the opportunities. While the most obvious difference between learning through international experiences of the TMT versus domestic partners is the locus of the learning source in relation to the boundaries of the firm, the benefits of learning from either source need to be concomitantly taken into account to understand their joint effects for new venture international intensity.

With respect to generating increased awareness of international opportunities, both internationally experienced TMTs and internationally experienced domestic partners play a relevant role in this part of the process. For TMTs, this awareness develops from a combination of time spent living abroad and/or experience working in international markets. Having prior international experience empowers TMTs to take on deliberate searches for international opportunities (Chandra et al., 2009). Domestic partners with international experience similarly provide an awareness of opportunities either vicariously or through developments that emerge as part of the collaborative agreement. Indeed “the extent to which an alliance partner operates in, or interacts with, international markets likely influences how international are the resulting opportunities.” (Fernhaber et al., 2009: 300).

In addition to being able to identify opportunities, ventures can leverage the international experiences of either their TMT or domestic alliance partners to be able to better critique the viability of the opportunities. The type of learning being leveraged in both the TMT and internationally experienced domestic partners is likely not related to specific country markets, but rather to more general firm-specific knowledge relevant to the internationalization process as a whole (Eriksson et al., 1997). Thus, the venture is likely to have a less naïve view of the general

importance of local governments in enabling execution of the opportunity, or in the way that language finesses may make-or-break communication efforts to targeted customer groups. The learning can be applied to specific opportunities that are identified, as a way to better assess their viability.

Lastly, both internationally experienced TMTs and internationally experienced domestic alliance partners can provide a new venture with a more favorable disposition to actually pursue the opportunities. TMT international experience is argued to be associated with a global mindset (Weerawardena et al., 2007), which enables a proactive approach to internationalization from the start (Oviatt and McDougall, 1995). Moreover, Casillas et al. (2009) note that internationally experienced TMTs perceive the costs of going abroad lower than TMTs without such experience, implying international exposure as a catalyst to taking action. As ventures have been shown to imitate the internationalization patterns of firms around them (Fernhaber and Li, 2010), the mere observation of internationalizing domestic partners also likely installs a sense of confidence needed to take action. In addition, domestic partners that operate abroad can ease the process-related uncertainty associated with internationalizing (De Clercq et al., 2005).

Taken together, above arguments suggest that there exists a similarity in learning benefits from both internationally experienced TMTs and internationally experienced domestic alliance partners. As the alliance literature argues that successful learning in alliances is significantly affected by the recognition of the need to learn (Inkpen and Tsang, 2007), we expect that the argued positive effects of internationally experienced domestic alliances are likely to diminish in influencing new venture international intensity as the number of internationally experienced TMTs grows — and accordingly, the need to learn about internationalization from such partners diminishes. Moreover, the positive effect of domestic alliance partners might diminish in the presence of internationally experienced TMTs due to the limited motivation for a new venture to look externally for learning if similar resources already exist internally. Indeed, recent literature even suggests that those ventures with “extensive congenital knowledge ... might be less motivated to learn from network partners, even if such vicarious learning would be important for their competitiveness” (De Clercq et al., 2012: 156).

However, for those ventures that lack their own internal internationalization experience to draw on, vicarious learning from internationally experienced domestic alliance partners will likely become increasingly important. As exemplified by Sasi and Arenius (2008), the companies explored in their research recognized the need to compensate for the lack of international business experience and reacted by either internally hiring international managers or relying on the external collaboration (for example using external consultants). This suggests that domestic alliances with international experience would be more beneficial for new venture international intensity when such ventures have a pronounced need to compensate for their lack of own international experience. Thus, we posit:

## H2.

Having greater TMT international experience diminishes (weakens) the positive relationship between the number of internationally experienced domestic alliance partners and new venture international intensity.

### 3.2.2. Foreign alliance partners

While foreign alliance partners and internationally experienced domestic alliance partners both offer distinct benefits to internationalizing new ventures, there are likely important complementarities to consider when it comes to the learning involved on an alliance portfolio level. We define complementarity to mean that the presence of foreign alliances increases the marginal benefit from having internationally experienced domestic alliances (and vice versa). Specifically, what foreign alliance partners bring in timeliness and depth of understanding of the foreign markets and potential opportunities, they lack in experience of the internationalization process from a venture's home country. In contrast, domestic partnerships with internationally experienced firms may provide an intimate understanding of the internationalization process, but lack in timeliness or level of detail regarding specific foreign market's opportunities. A closer examination of the distinct nature of these two learning sources suggests that new ventures that have both domestic and foreign partners might be better positioned to exploit international opportunities due to important synergies across respective partners' experiences.

The enhanced confidence about internationalization process gained by vicariously learning from internationally experienced domestic partners is likely to be well complemented by learning about real-time foreign country circumstances from foreign alliance partners. Indeed, perceiving an opportunity as a positive one is influenced by the extent to which one believes a situation is controllable (Jackson and Dutton, 1988). Hence, new ventures that maintain both domestic partners with an international experience and foreign partners may conceive of opportunities learned from foreign partners in a more positive light, because both the internationalization process (due to learning from domestic partners) and the nature of foreign opportunity (due to foreign partners' rich insights) appear less uncontrollable (Krueger, 2000). In terms of opportunity execution, by learning about the competitive landscape and intimately understanding customer needs from foreign partners, a venture's likelihood to execute effectively will be higher when vicarious learning from domestic alliances with international experience also allows better understanding of how to leverage received insights from foreign markets from a host country perspective. Thus, attitudes and actions towards internationalization, shaped early in the venture's lifecycle, will likely stimulate international intensity for ventures whose alliance portfolios complement internationally experienced domestic partners with foreign one providing unique local insight.

Moreover, learning from domestic partners' international experience can also help in managing the potential costs of international alliances to the extent that domestic partner's experience includes participation in international partnerships. Reaping rewards from international relationships is often difficult due to lack of trust or understanding between partners of different nationalities (Lu and Beamish, 2001), which might be additionally hampered with cultural differences (Parkhe,

1998), ultimately hindering transfer of knowledge between partners (Lyles and Salk, 1996). Alternatively, foreign partners can behave in a self-serving way (Coviello and Munro, 1997). In such situations, learning from domestic partners' about international 'alliance capabilities' (Inkpen and Tsang, 2005) might help the venture in extracting the maximum value from own foreign partnerships. Hence, domestic partners with international experience might help the ventures more successfully manage the complexity of international collaborations, allowing synergies in the alliance portfolio. Hence we hypothesize:

### **H3.**

Having a greater number of foreign alliance partners increases (strengthens) the positive relationship between the number of internationally experienced domestic alliance partners and new venture international intensity.

## **4. Methods**

### **4.1. Sample**

The firms in our sample were identified through Securities Data Corp (SDC) Global New Issues database and our final sample consisted of 194 U.S. new ventures in computer equipment and communication industries that underwent an initial public offering (IPO) from 1995 through 2000.

<sup>4</sup> We consider a firm to be a new venture if it was six years old or less at the time of IPO (Robinson, 1999 and Shrader et al., 2000). In order to achieve an adequate sample size and avoid any possible biases from sampling from only one year, we sampled over several IPO years. We focus on high-technology firms that underwent an IPO for three reasons. First, internationalization has become an imperative to compete in some high technology industries (Shrader et al., 2000). Hence, ventures in high-technology industries such as computer equipment and communications are expected to have greater variance in new venture internationalization (Kotha et al., 2001 and Zahra et al., 2000). Prior research also suggests that technological knowledge is a principal means of gaining global market share and cross-border integration (Kobrin, 1991). Firms were deemed to be high technology if they were so classified by SDC's Global New Issues database in the subcategories of communications and computer equipment. Second, IPO high technology firms are more likely to be growth-oriented and, accordingly, more likely to consider foreign markets in their early years. Finally, IPO data are believed by many researchers to be valid and reliable (Carpenter et al., 2003 and Robinson and McDougall, 1998).

In considering this sample of firms, we followed prior literature and excluded all corporately held ventures (subsidiaries) and spinoffs from the sample (Carpenter et al., 2003). Hence, our sample is composed of independently owned and operated new ventures. This was important because non-independent ventures might have access to their parent company's resources, 'borrow' from parent's legitimacy in international markets or have their internationalization strategy in some way (positively or negatively) "imprinted" by the parent firm, ultimately confounding our model. In addition, only firms that exhibited sale revenue in the year following IPO were retained in the sample in order to have a one-year lag time between independent and dependent variables.

### **4.2. Variables**

#### **4.2.1. International intensity**

To operationalize new venture international intensity, we relied on data collected from Compustat North America, and calculated the percentage of foreign over total sales in the year following its IPO. This measure is one of the most commonly used in the literature (Carpenter et al., 2003, Fernhaber et al., 2009, McDougall and Oviatt, 1996, Mesquita and Lazzarini, 2008 and Preece et al., 1998). Of the three internationalization dimensions identified in the literature (Sullivan, 1994), this measure best facilitates comparability with other new venture internationalization studies.

#### **4.2.2. Number of domestic alliance partners with international experience**

To identify new ventures' alliance partners, we relied on the Joint Venture/Strategic Alliance database of Securities Data Corp (SDC). We included any alliance partnership that had been formed in the period from new venture founding through the initial public offering of the new venture. To qualify as a venture's domestic alliance partner with an international experience, the alliance partner had to satisfy two criteria. First, the firm had to have been headquartered in the U.S. Second, the firm had to have at least 10% of sales outside the U.S. which is consistent with the reporting threshold required by the U.S. Securities and Exchange Commission (SEC). For public firms, we accessed international sales information through Compustat North America. Otherwise, following prior research (Yu et al., 2011) a Web search was made to determine how to classify the alliance partner. Specifically, we examined the prospectus, website and articles in Lexis-Nexis to make a classification decision. To establish the measure on the level of the new venture, the number of alliance partners that met the above criteria was then summed (Kotha et al., 2001). Thus, if a new venture had five alliance partners, but only three were headquartered in the U.S. and had international sales, a three would be entered for this variable. We felt a sum was more appropriate than taking the average or percentile, as each additional partner brings its experience into the relationship and impacts the new venture.

#### **4.2.3. TMT international experience**

The international experience of the new venture's TMT was assessed by examining the IPO prospectus for each venture. The prospectus includes a list and brief biography of all members of the TMT. The biographies listed in the prospectus were used to verify whether or not each member of the TMT had international work experience (e.g. Bloodgood et al., 1996 and Carpenter et al., 2003). Members were considered to have had foreign work experience if their biography noted that they either (1) had held a position overseeing the international component for a previous employer, (2) had worked in a foreign company, and/or (3) had worked for the foreign subsidiary of a U.S. company. TMT members were coded as to whether they had international work experience (1 = Yes; 0 = No). To create the value for the TMT international experience variable, the data was summed for each new venture. Consistent with prior studies on international experience of new venture's TMTs (Bloodgood et al., 1996) we chose not to adjust the variable for TMT size.

#### **4.2.4. Number of foreign alliance partners**

In measuring the number of foreign alliance partners we counted all venture's alliance partners that were headquartered outside the U.S. The national identity of partners was established through the SDC Platinum Joint Venture/Strategic Alliance database. Comparable to other studies of new venture internationalization (e.g. Yu et al., 2011), we find that of those ventures that had alliances, the majority had one or two foreign alliance partners, with two ventures having as many as five alliance partners located outside of the U.S.

#### **4.2.5. Control variables**

We controlled for a number of important variables. As larger firms have more resource availability that might influence their ability to internationalize (Bloodgood et al., 1996), we controlled for venture's *size* operationalized as the number of employees in its IPO year ( McDougall and Oviatt, 1996). Following prior research (e.g. Zahra et al., 2000), we also controlled for new venture age. A firm's *age* might influence its propensity to internationalize, as older firms typically have more resources and a greater number of network relationships on which to rely ( Zahra et al., 2000). We calculated the age of the new venture at IPO by consulting the founding date listed in the SDC's Global New Issues database. We also made sure to cross-validate such obtained data by referring to the new venture's prospectus. Next, we controlled for the *R&D intensity* of the new venture as the development of unique products has been frequently cited as an important antecedent of new venture internationalization (e.g. Autio et al., 2000). R&D intensity was calculated as R&D expenditures divided by sales as of the IPO year. We controlled for the presence of *venture capital (VC) financing* because prior research found that it influences internationalization ( George et al., 2005). To determine whether or not the venture had received VC financing (dummy variable equal to 1), we relied on the listings included within the Venture Economics Database of the SDC. To control for any differences in *industry sectors*, a dummy variable was utilized to distinguish ventures belonging to computer equipment industry group from those belonging to communication industry (reference group in our analyses). This information was obtained from the SDC's Global New Issues database. Additionally, dummy variables were also created to control for the *IPO year*, as the sample ventures had completed an IPO at various times from 1995 to 2000. Finally, in order to isolate the effects of domestic alliance partners with international experience, we need to control for any other network effects that may have contributed to new venture internationalization. Hence, we control for *the number of remaining domestic partnerships* that the venture had formed prior to the year of IPO. Given the skewness of many of our count variables (i.e. alliance variables, employee count, TMT's international experience), they were respectively transformed using square root transformation ( Neter et al., 1996).

#### **4.3. Analytical methods**

In order to test our hypotheses, we needed to select a model that appropriately takes into account the nature of our sample and the dependent variable. Specifically, among the 194 new ventures in our sample, 51% did not have any international sales, resulting in a zero as an input for these variables. Including both internationalized and purely domestic firms could raise concerns that the model makes an implicit assumption that the factors leading a firm to internationalize are the same factors that influence the subsequent intensity of internationalization. A recommended method to deal with potential existence of such sample selection bias is a Heckman model, for which we

developed two equations: (1) selection equation that through a probit analysis predicts whether or not the venture has internationalized, and (2) an outcome equation which predicts the venture's observed internationalization intensity.<sup>5</sup> We used both the maximum likelihood estimator and the Heckman two-step estimator to inquire into the robustness of our results to both estimation methods. The result for the ML estimator showed that rho (correlation coefficient between errors in the selection and outcome equation) is not significantly different from zero. Similarly, with the two-step estimator, the obtained inverse Mills ratio was not significant. Hence, both methods suggested that the selection process is not biasing the results and that a Heckman selection model was not advantageous to an ordinary least squares (OLS) estimation.

Given that our dependent variable is continuous, but censored, we followed prior literature examining the new venture international intensity, which relied on OLS regression in testing results (e.g. Preece et al., 1998). However, since some of the recent studies suggest that interval regression may better suit dependent variables such as ours (Rodriguez and Rodriguez, 2005), we also estimated our model using interval regression. Equivalent to Tobit regression when used with censored data, interval regression also allows the use of clustered robust standard errors (Amemiya, 1973). As both methods produced similar results, we report the more commonly employed OLS regression results.

#### **4.4. Results**

We present the descriptive statistics and correlations in Table 1. As evident from the correlation table, correlations between alliance variables are somewhat high — however, this level of correlation is expected as all three measures evaluate the venture's alliance activity (Powell et al., 1996). While such levels of collinearity do not necessarily bias parameter estimates (Greene, 2000) to guard against multicollinearity, we calculated the variance inflation factor (VIF) for all variables. The mean VIF was 3.37, and all obtained VIFs were well below the concerning value of 10 (Neter et al., 1996). We also sequentially introduced our variables into the models, and present separately models containing respective interaction effects.

In Table 2, we present the results from our analysis. In Model 1 we include all the control variables. Model 2 includes the main effect for number of internationally experienced domestic alliance partners. Models 3 and 4, respectively, include separate interaction effects, and Model 5 represents the full model. The explained variance increases from model to model, and the  $R^2$  for Model 5 is 17% (adjusted close to 10%), which is in line with other studies explaining firm international intensity (e.g. Elango and Pattnaik, 2007 and George et al., 2005).

In our control model, consistent with prior literature, we find a positive direct effect for TMT's international experience (e.g. Bloodgood et al., 1996) and number of foreign alliance partners (e.g. Yu et al., 2011). The relationship of the number of domestic partners without international experience and new venture international intensity is negative, but not significant. In Model 2, we add the direct effect of internationally experienced domestic alliance partners on international intensity, which is positive and marginally significant ( $\beta = 0.032$ ,  $p < 0.1$ ). This marginally supports our first hypothesis. Interestingly, only once we account for the internationally

experienced domestic partners does the negative effect of internationally inexperienced domestic partners become significant ( $\beta = -0.035, p < 0.05$ ).

In Hypothesis 2, we suggested that having greater TMT international experience diminishes (weakens) the positive relationship between the number of internationally experienced domestic alliance partners and new venture international intensity. Results from Model 3 show a negative and significant coefficient for this interaction ( $\beta = -0.05, p < 0.05$ ), which remains consistent in the full model (Model 5,  $\beta = -0.081, p < 0.01$ ). To better appreciate the nature of this result, we followed established methods (Aiken and West, 1991) to plot the interaction effect. In Fig. 1, the two lines on the graph respectively represent situations in which the new ventures have high and low values for the TMT's international experience (where high and low are respectively calculated as one standard deviation above and below the mean). The increasing slope of the line representing TMTs with low international experience means that those new ventures with low TMT international experience will achieve higher international intensity when they have more, rather than fewer domestic alliances with international experience. The second line in Fig. 1 suggests that for ventures with high TMT international experience the number of domestic alliances with international experience does not seem to substantially influence their international intensity. Evidencing a diminishing contribution of domestic partners with international experience to internationalization for ventures with highly internationally experienced TMTs provides support for Hypothesis 2.

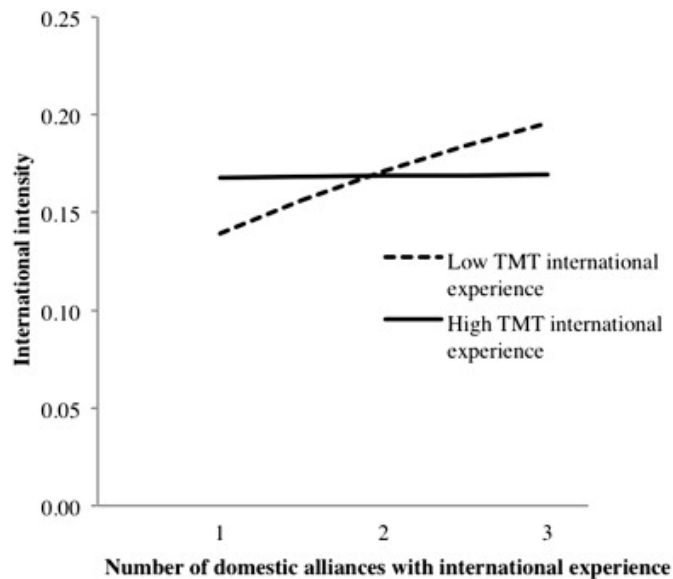


Fig. 1.

Interaction of top management team's international experience and number of domestic alliances with international experience for new venture international intensity.

In Hypothesis 3, we argued that having a greater number of foreign alliance partners increases (strengthens) the positive relationship between the number of internationally experienced domestic alliance partners and new venture international intensity. Results from Model 4, where this interaction is introduced, show a positive and marginally significant coefficient for this interaction ( $\beta = 0.035, p < 0.1$ ). In the full model, when both interactions are included, the effect is positive



and significant ( $\beta = 0.066$ ,  $p < 0.01$ ). To more fully understand this interaction, we again proceed to plot the interaction effect. In Fig. 2, the two lines on the graph respectively represent situations in which the new ventures have no foreign partners and high values for the number of foreign alliance partners (where high is calculated as one standard deviation above the mean and equals 1.35 foreign alliances).<sup>6</sup> The increasing slope of the line representing new ventures with more foreign alliance partners means new ventures with larger foreign alliance networks will achieve higher international intensity when they have more internationally experienced domestic alliance partners. The relationship appears to suggest a complementary effect of the number of foreign and domestic partners with international experience, providing support for Hypothesis 3.

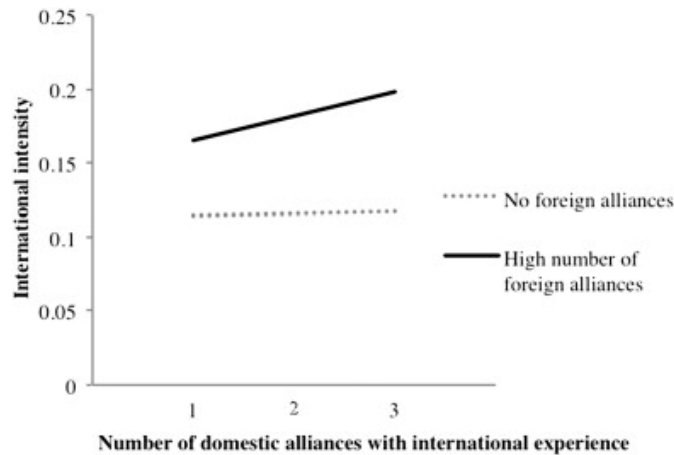


Fig. 2.

Interaction of number of foreign alliance partners and domestic alliances with international experience for new venture international intensity.

To probe further into the nature of complementarity in this model, we followed the procedures recommended by Brambor et al. (2006). We found that the marginal effect of internationally experienced domestic alliances on international intensity is increasingly positive and significant starting at 0.53 foreign alliances onwards. Looking at the marginal effect of foreign alliances given the same interaction, we found that their effect is increasingly positive and significant starting at 1.03 internationally experienced domestic alliances onwards. In the context of our sample, these findings suggest that complementing effects exist for both variables in the interaction for all of the observations that had at least one foreign and one internationally experienced domestic alliance.

#### 4.5. Robustness analysis

While our study focused on TMT international experience as a moderator in exploring the role of domestic alliances and new venture international intensity, earlier studies suggested that the international exposure of TMTs can serve a role in new venture's international alliance formation (e.g. Cumming et al., 2009 and Lee and Park, 2008). If this was the case in our sample, our model could suffer from potential endogeneity. We took similar precautions with the variable representing internationally experienced domestic partners, just to guard against the possibility that more internationally experienced TMTs are more prone to forming partnerships with internationally experienced domestic firms. We followed recent studies suffering from similar

potential endogeneity issues (Pollock et al., 2010 and Zaheer and Bell, 2005) and respectively regressed the number of foreign and internationally experienced domestic partners on the international experience of the TMT. We used residuals from these regressions, which estimate respectively the portions of ventures' alliance partners experience *not accounted for* by the venture TMT's international experience, to create new independent variables, which we subsequently entered into the model of interest, together with such newly formed interaction terms. The results remained robust to this specification, increasing confidence in our findings.

In order to probe the endurance of the effects of internationally experienced domestic alliances and their interactions with TMT international experience and foreign alliances on new venture international intensity, we collected data for the dependent variable measured two years following venture's IPO. The results remained largely consistent in direction and significance, with the only difference being the somewhat diminished significance of the interaction of number of foreign alliances and number of internationally experienced domestic alliances ( $p < 0.1$ ) in the full model.

## **5. Discussion**

In this study, we sought to further our understanding of the role of domestic partnerships in new venture internationalization. We argued that in studying the learning that takes place in domestic alliances, domestic partners' international experience should be taken into account. Moreover, we reasoned that the effect of domestic alliances with international experience is likely to be impacted by the needs and opportunities to use learning accessible via such alliances. Following recent literature that highlights the importance of examining different learning sources (De Clercq et al., 2012), we developed a model that highlights two moderating factors in the relationship between domestic partnerships and new venture internationalization: TMT's international experience and foreign partnerships. In contrast with prior studies (Wiklund and Shepherd, 2009 and Yu et al., 2011), our results confirm the positive and direct effect of domestic partners (although only marginally significant). Moreover, we found important boundary conditions, as evidenced in interactions of domestic partners with TMT international experience and foreign alliance partners, respectively.

Taken together, our results suggest that domestic alliance partners can be important network resources for new ventures when partners' international experience is taken into account, and when regarded concomitantly with congenital and external learning sources that shape the needs and opportunities to apply learning from internationally experienced domestic partners. To this end, our results demonstrate how consideration of alliance partners' location (Das and He, 2006) and their international experience (Yu et al., 2011) can enrich new venture internationalization models. While the positive direct effect of internationally experienced domestic alliances was marginally significant when examined in isolation, our findings show that international experiences gleaned from home country alliances can be particularly beneficial for international intensity when (1) compensating for ventures' TMT's lack of internationalization experience or (2) when complemented with foreign alliance partnerships. To that effect, the finding that domestic alliances with international experience can help in compensating for the lack of TMT's international experience enriches a line of research examining the boundary conditions of any single learning source (De Clercq et al., 2012). Building on Bruneel et al. (2010) who concluded that inter-

organizational learning from key partners serves as a substitute for a lack of firm-level international experience, our study suggests that the prior experience brought to the venture through its TMT can similarly be substituted or compensated for through internationally experienced domestic partners.

Finding that learning about internationalization from domestic partners is complemented by learning from foreign partners contributes to alliance management literature by examining the characteristics of firm partners in alliance portfolios (Lavie and Miller, 2008). Indeed, our results underscore the synergies that may result from geographically balanced portfolios. To the extent that learning about internationalization from domestic alliances can help new ventures manage some of the challenges resulting from geographical distance or cultural differences between nationalities in foreign alliances, future research is encouraged to consider both types of partners concomitantly, as otherwise we might be missing out effects resulting from their synergies. Indeed, while prior literature underscores the importance of ventures' developing a generic 'alliance capability' in finding foreign partners (Al-Laham and Souitaris, 2008), our study points that vicarious learning about such capabilities may not be only an antecedent, but also a complement to learning from foreign partnerships.

Our results also bore out an unexpected finding that offers intriguing possibilities for future research. We argued and found that learning from internationally experienced domestic partners would act as a substitute for those ventures lacking such experience internally within their TMTs (as evidenced by the positive slope in Fig. 1). Similarly, given the lack of need for externally accessing internationalization knowledge found in internationally experienced TMTs, we evidence an almost 'no-effect' line in Fig. 1. What we did not expect was to see the lines cross over, evidencing that the absolute level of internationalization intensity given two or more alliances with internationally experienced domestic partners would be higher for the internationally inexperienced TMTs than for those TMTs with international experience. Although future research is warranted, this may imply that the learning through external partnerships is more current, and potentially has a stronger impact on international intensity for those new ventures without internationally experienced teams (learning advantages of newness are greater), than for those ventures whose prior TMT's experiences may have diverged or should be in some ways 'unlearned'. Alternatively, there may be a hierarchy of learning where the international experiences of domestic partners are possibly more specific, and thus more informative and impactful for the internationalizing venture, than the experiences of TMTs, which might be more generic or diverse in nature. As noted by Zollo and Winter (2002: 347-348), "individuals have to make inferences as to the applicability of lessons learned in the context of past experiences to the task presently at hand." Future research would benefit by further exploring the hierarchy of applicability of different learning sources for various aspects of the internationalization process.<sup>7</sup>

Finally, although in this paper we did not theorize about the domestic alliances without international experience, our results point to the significant and negative relationship they have on new venture international intensity, which might shed light on some earlier findings that did not take into account partners' international experience. Depending on the distribution of domestic partners' international experience in a firm's alliance portfolio, it may be that those portfolios

dominated by partners experienced in national markets distract the venture from international markets (Boehe, 2013) and have a negative effect for new venture internationalization (Lu and Beamish, 2001) or for more balanced portfolios, the positive and negative effects might balance out to ‘hide’ the overall effect of the domestic alliance portfolio (e.g. Wiklund and Shepherd, 2009). More generally, the notion that larger domestic alliance networks may in some ways ‘suffocate’ internationalization might be suggestive of the potential ‘dark side’ of domestic networks. Indeed, while a venture's ability to add partners and grow its network is critical in the internationalizing process (Al-Laham and Souitaris, 2008), alliance networks are often seen in an overly positive light (Zaheer et al., 2010), with rare research examining their trade-offs (e.g. Miles et al., 1999). In that sense, our study simultaneously sheds light on factors that allow ventures to better leverage their domestic alliances, but also provides an important check for whether or not their domestic partners are indeed beneficial in the context of internationalization.

Our study has important practical implications for entrepreneurs with internationalization aspirations. Despite their varied benefits, alliances require substantial investment for resource-pressed new ventures (Alvarez and Barney, 2001). Hence, our findings inform entrepreneurs to consider at least two factors when adding domestic alliances to their network. First, we encourage entrepreneurs to pay attention to the partner's international experience. This is especially relevant to those entrepreneurs with international ambitions lacking own international experience; as such partnerships can substitute for internal internationalization experience deficit. Second, finding complementary relationship between domestic and foreign partners suggests that new ventures can enjoy synergies from their alliance portfolios in terms of international intensity if they are able to learn how to transfer knowledge across alliances. Indeed, while network size has been found to have a generally positive relationship with new venture performance (Baum et al., 2000), following our study internationalizing ventures should keep in mind the partners' international experience as well as the geographic composition of their alliance portfolio and experience of the ventures' TMT.

## **6. Limitations and future research**

Like all research, our findings should not be interpreted without some caution. For example, our sampling includes only new ventures that underwent an IPO. While this allowed availability of international sale data and comparability with other studies examining international intensity of public high tech new ventures, we acknowledge that our sampling method precludes us from making generalizations to private firms in other countries or industries. Our sample also included both ventures that had internationalized within the targeted timeframe as well as those that had not. While our analysis took into account sample selection bias, a more fine-tuned analysis solely focused on a larger sample of internationalized ventures would be useful. Moreover, while our measures of ventures' alliance activity are comprehensive to the extent that they trace new ventures' alliances to the early days of founding, we concur that timing and sequencing of such alliances may be a fruitful area for future research. Although we know that early partnerships are important for new venture's network size (Milanov and Fernhaber, 2009), status (Milanov and Shepherd, 2013), and early performance (Baum et al., 2000), such imprinting perspective (Stinchcombe, 1965) could inform the extent to which partnering – through early exposures to internationalized

firms – sets the path for internationalization. Along those lines, following Bruneel et al. (2010), future research could examine how and when experiential learning of new ventures begins to have an impact on the reported relationships. Such an approach would also benefit by looking at endurance of the impact of partnerships on new venture internationalization captured at various points after alliance formation.

Finally, future research could further investigate the aspects of international experience, both on a new venture, and on an alliance partner level. In terms of new venture's TMT, future research could refine our model by accounting for the breadth (e.g. number of countries) and depth (length of international working experience) of international experience; or a combination of both dimensions. Similarly, for domestic alliance partners, it is likely that these firms differ both in breadth of internationalization (e.g. number and diversity of foreign markets), but likewise their own international intensity. While we believe that our study represents an important early step in recognizing attributes of domestic partners as relevant, we encourage future research to take such nuances in partners' international experience into account.

## 7. Conclusions

In conclusion, our research extends the existing IE literature by focusing on the lesser-understood role of domestic alliance partners in the internationalization process. In addition to acknowledging their international experience as an important attribute, we introduce two key moderating factors under which domestic alliance partners with international experience can be more or less influential. While internationally experienced domestic alliance partners can serve as a substitute for lack of TMT international experience, a complementary relationship is created with foreign alliance partners. Thus, we highlight the importance of considering geographic location within the alliance portfolio as well as its congruence with ventures' internal resources.

## Tables

**Table 1**  
Descriptive statistics and correlations.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Mean	0.13	0.38	3.56	0.81	0.78	0.48	0.11	0.14	0.15	0.34	0.22	1.15	0.44	0.92	0.68
s.d.	0.18	0.68	1.43	3.63	0.42	0.50	0.31	0.35	0.36	0.48	0.42	1.34	0.91	2.08	1.55
Min.	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Max.	0.92	7.87	6	46.17	1	1	1	1	1	1	1	8	5	14	11
1. International intensity	1.00														
2. Size (employees, 1000)	-0.08	1.00													
3. Age	0.15	-0.19	1.00												
4. R&D intensity	-0.08	-0.16	-0.07	1.00											
5. VC (dummy)	0.11	0.03	0.11	0.02	1.00										
6. Computer equipment industry	0.14	-0.03	0.07	-0.07	-0.08	1.00									
7. IPO year 1996 (dummy)	0.04	-0.14	-0.04	-0.03	-0.17	-0.01	1.00								
8. IPO year 1997 (dummy)	0.03	-0.12	-0.15	-0.01	-0.17	0.10	-0.14	1.00							
9. IPO year 1998 (dummy)	0.00	0.14	-0.06	-0.08	-0.05	-0.07	-0.15	-0.18	1.00						
10. IPO year 1999 (dummy)	-0.05	0.03	0.07	0.12	0.10	0.02	-0.25	-0.29	-0.31	1.00					
11. IPO year 2000 (dummy)	-0.01	0.10	0.12	-0.02	0.20	-0.12	-0.19	-0.22	0.23	-0.38	1.00				
12. TMT international experience	0.24	-0.03	0.24	-0.05	0.20	0.02	-0.07	-0.11	-0.09	0.13	0.07	1.00			
13. Number of foreign alliances	0.13	0.03	-0.12	0.05	0.26	0.04	0.03	-0.03	0.06	0.03	-0.08	0.17	1.00		
14. Number of domestic alliance	-0.02	0.03	-0.03	-0.07	0.17	-0.03	0.04	-0.10	0.04	0.12	-0.13	0.10	0.51	1.00	
15. Number of domestic alliance	0.13	0.02	0.00	0.02	0.25	0.11	0.00	-0.06	-0.11	0.09	-0.01	0.12	0.53	0.53	1

All correlations with absolute value larger than 0.14 are significant at p < 0.05 level.

**Table 2**

OLS regression results, dependent variable: International intensity.

	Model1		Model2		Model3		Model4		Model5	
<i>Control variables</i>										
Size (employees, 1000) <sup>a</sup>	-0.034	(0.032)	-0.036	(0.032)	-0.027	(0.031)	-0.040	(0.032)	-0.029	(0.031)
Age	0.014	(0.009)	0.013	(0.009)	0.014	(0.009)	0.013	(0.009)	0.013	(0.009)
R&D intensity	-0.004 <sup>†</sup>	(0.002)	-0.004*	(0.002)	-0.004*	(0.002)	-0.004*	(0.002)	-0.005*	(0.002)
VC (dummy)	0.035	(0.040)	0.030	(0.040)	0.019	(0.042)	0.035	(0.041)	0.022	(0.041)
Computer equipment industry (dummy)	0.044 <sup>†</sup>	(0.027)	0.040	(0.027)	0.043	(0.027)	0.040	(0.027)	0.046	(0.027)
IPO year 1996 (dummy)	0.057	(0.079)	0.070	(0.072)	0.064	(0.073)	0.068	(0.066)	0.059	(0.063)
IPO year 1997 (dummy)	0.047	(0.071)	0.059	(0.064)	0.068	(0.066)	0.053	(0.059)	0.060	(0.056)
IPO year 1998 (dummy)	0.039	(0.079)	0.059	(0.074)	0.063	(0.075)	0.055	(0.070)	0.057	(0.068)
IPO year 1999 (dummy)	0.004	(0.068)	0.016	(0.061)	0.015	(0.063)	0.017	(0.054)	0.016	(0.052)
IPO year 2000 (dummy)	0.011	(0.068)	0.022	(0.061)	0.021	(0.063)	0.025	(0.056)	0.026	(0.054)
TMT international experience <sup>a</sup>	0.050*	(0.024)	0.050*	(0.023)	0.051*	(0.023)	0.046 <sup>†</sup>	(0.024)	0.042 <sup>†</sup>	(0.022)
Number of foreign partners <sup>a</sup>	0.046*	(0.023)	0.033	(0.023)	0.045 <sup>†</sup>	(0.023)	0.023	(0.024)	0.033	(0.023)
Number of domestic partners without international experience <sup>a</sup>	-0.026	(0.016)	-0.035*	(0.015)	-0.036*	(0.014)	-0.037*	(0.015)	-0.040**	(0.014)
<i>Direct effect</i>										
Number of domestic partners with international experience <sup>a</sup>			0.032 <sup>†</sup>	(0.018)	0.040*	(0.018)	0.016	(0.019)	0.016	(0.014)
<i>Moderating variables</i>										
TMT international experience × number of domestic partners with international experience					-0.052*	(0.025)			-0.081**	(0.028)
Number of foreign partners × number of domestic partners with international experience							0.035 <sup>†</sup>	(0.020)	0.066**	(0.022)
Constant	0.041	(0.083)	0.043	(0.076)	0.045	(0.078)	0.036	(0.070)	0.335	(0.067)
F value	3.53***		3.69		3.71***		3.34***		3.92***	
R <sup>2</sup>	0.126		0.134		0.149		0.143		0.174	
Adjusted R <sup>2</sup>	0.062		0.066		0.078		0.070		0.099	

Unstandardized estimates are reported. Robust standard errors are in parentheses. (n = 194).

<sup>†</sup> p ≤ 0.10, \* p ≤ 0.05, \*\* p ≤ 0.01, \*\*\* p ≤ 0.001.<sup>a</sup> Variables transformed using square root transformation.

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