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Khurshed, A, Mohamed, A orcid.org/0000-0002-2974-9467, Schwienbacher, A et al. (1 more author) (2020) Do venture capital firms benefit from international syndicates? Journal of International Business Studies, 51 (6). pp. 986-1007. ISSN 0047-2506

https://doi.org/10.1057/s41267-019-00296-8

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Do venture capital firms benefit from international syndicates?

ABSTRACT

This paper examines the benefits of syndicating with foreign venture capital (VC) firms for domestic VC firms in emerging markets. We find that the VC firms that are domestic to their invested companies and previously syndicated with foreign partners invest proportionately more frequently in riskier ventures. After gaining syndication experience with foreign VC firms, a larger number of their portfolio companies successfully exited, thereby suggesting improved performance. We hypothesize that this outcome is due to the organizational learning effects. While the previous research has shown benefits for foreign VC firms, our results show that domestic VC firms also benefit from international syndication through improved investments.

JEL classifications: L26, G2

Keywords: organizational learning; venture capital; syndication; cross-border investments

This version: November 14, 2019

INTRODUCTION

Large and well-established North American and European venture capital (VC) firms are increasingly investing in cross-border deals (Aizenman & Kendall, 2012; Cumming, Knill, & Syvrud, 2016; Dai & Nahata, 2016), especially in Asia, due to growing investment opportunities in that region (Dai, Jo, & Kassicieh, 2012). In the last decade, many Asian countries have opened their economies to foreign VC investments by removing major obstacles and impediments (Cumming et al., 2016). These foreign VC firms not only bring capital but also provide knowledge platforms to the domestic VC firms located in these emerging VC markets through the syndication process.

This paper investigates the knowledge gained by the VC firms in emerging markets when syndicating with foreign VC firms. We define foreign (domestic) VC firms as VC firms located outside of (in the same) the country in which the portfolio company is located. Collaborations between (domestic and foreign) VC firms are sustainable when the benefits are mutual. From a foreign VC firm perspective, the benefits when investing abroad under syndication arrangements largely stem from a combination of information asymmetry and the country's legal system, both of which require domestic knowledge and contacts (Dai et al., 2012; Wang & Wang, 2012; Cumming et al., 2016; Mingo, Morales, & Dau, 2018).

Little is known, however, about whether domestic VC firms also benefit from syndication with foreign VC firms by acquiring new knowledge, although such benefits are often assumed. To investigate this different perspective, we use the organizational learning theory (Inkpen, 1998, 2000; Lyles & Salk, 1996) with the aim of examining the tangible and intangible benefits obtained by domestic VC firms when syndicating with foreign partners. The VC industry is characterized by the need for specialized skills in selecting, assisting, and monitoring portfolio companies (Brander et al., 2002; Dai & Nahata, 2016). This tacit knowledge is particularly difficult to acquire and requires significant experience with and

exposure to other deals. Syndication is an important means through which this knowledge can be acquired, as syndication constitutes a unique way for VC firms to gain exposure to others' views (or "socializing"; Nonaka, 1994) and to learn how "deals are done" directly from reference individuals of well-established, foreign VC firms. This practice, in turn, helps VC firms to better address the information asymmetry and agency problems (Jensen & Meckling, 1976; Haugen & Senbet, 1981) that plague innovative startups (Brander et al., 2002; Cumming et al., 2016). The acquisition of such tacit knowledge comes with experience (Nonaka, 1994). Such learning opportunities arise frequently during the VC syndication process, as the different VC firms participate in board and shareholder meetings on a regular basis during the years when they are locked in the investment, thus enabling the acquisition of different types of procedural knowledge (skills).

The question of organizational learning through cross-border investments has been investigated in prior studies, especially in other contexts, such as joint ventures (Fang & Zou, 2010), cross-border acquisitions (Dikova, Sahib, & van Witteloostuijn, 2010), and internationalization (Casillas & Moreno-Menendez, 2014; Gao & Pan, 2010; Jonsson & Foss, 2011). Like VC studies, these works mostly focus on the learning benefits to the foreign player, not the domestic player. Our focus on VC syndication offers a suitable setting because it occurs repeatedly, which enables the changes in behavior and performance to be measured over time. In this setting, the accumulation of specialized knowledge is also critical to good performance.

Measuring knowledge acquisition is difficult in empirical research, as it is typically multidimensional and intangible (Lyles & Salk, 1996). One method is through its impact on performance, which is an indirect way of capturing the impact of knowledge acquisition on the ultimate outcome. Given the particular nature of the VC industry, investigating the performance of domestic VC firms in their follow-up investments (i.e., future investments in

which this knowledge can be used rather than investments in which the actual learning process takes place) would reasonably capture the learning benefits from past syndications with foreign VC firms. Domestic VC firms from an emerging market can learn from foreign, well-established VC firms in a way that informs the future selection of portfolio companies in similar or even different sectors. Other unobservable benefits to domestic VC firms include better contract design, knowledge of advising and nurturing entrepreneurs, and monitoring of portfolio companies. Therefore, we expect to see direct impacts on the selection and performance of future investments.

To test these predictions, we examine the VC investments made for 3,309 portfolio companies between 1996 and 2009. Our sample includes companies based in 13 Asian countries. Each of these investments has at least one domestic VC firm as an investor. We impose this restriction to obtain a setting for testing our prediction based on learning. For each of these VC-backed companies, we identify the participating domestic VC firms and assess whether they had previously been involved in deal syndications with foreign VC firms. We then investigate whether the companies financed by domestic VC firms with international syndication experience differ in terms of their risk level and whether they are more likely to be successfully exited.[1] In doing so, we can assess whether the learning process affects the investment selection and performance of domestic VC firms.

Our empirical results show that domestic VC firms tend to invest more often in riskier portfolio companies after their syndication experience with foreign partners. These results derive from the following three distinct measures of risk: whether the domestic VC firm invested in the first round of financing, whether the first round of investment was an early-stage investment, and whether the portfolio company is active in a high-tech sector. Prior VC studies have used these measures to describe investment risk (e.g., Carpenter &

[1] Following prior studies (e.g., Dai et al., 2012; Dai & Nahata, 2016), we deem exits through an initial public offering (IPO) or a trade sale as successful.

Petersen, 2002; Cumming et al., 2016; Dai et al., 2012). This finding regarding the switch from less risky to riskier investments can be attributed to the skills and expertise domestic VC firms acquire during syndications with foreign VC firms. To investigate whether the changes in the domestic VC firms' investment behavior are due to syndication with foreign VC partners and no other factors, we include a large set of control variables in our sample. We also include deals made by domestic VC firms that have not previously syndicated with foreign VC firms to ensure proper comparability.[2]

In terms of performance, we find that the percentage of successful exits (either an initial public offering (IPO) or a trade sale) from the portfolio companies is higher for domestic VC firms with past international syndication experience than for domestic VC firms without such experience. This evidence is more pronounced when the domestic VC firms syndicate with North American or European VC firms than when they do so with Asian VC firms. These results are again robust to the inclusion of a sample of domestic VC firms without any foreign VC syndication experience. Moreover, we document that the results hold when considering only an IPO or only a trade sale as a successful exit.

Overall, our results show that VC firms in emerging markets learn from their foreign VC partners and can capitalize on their acquired knowledge in subsequent investments. This learning experience provides VC firms with the expertise and confidence to invest in riskier industries in the future, such as high-tech sectors and early-stage ventures, and increases the likelihood of successful exits from the portfolio companies.

This paper contributes to the growing literature on cross-border VC syndications by showing the knowledge domestic VC firms gain from syndicating with foreign VC firms. Other studies have instead focused on the benefits for foreign VC firms (Buchner, Espenlaub, Khurshed, & Mohamed, 2018; Cumming et al., 2016; Dai et al., 2012; Dai & Nahata, 2016;

[2] All domestic VC firms included in our sample had at least some previous syndication experience with other domestic VC firms. Thus, our result cannot be attributed to syndication per se, but only syndication with foreign partners.

Wang & Wang, 2012), disregarding the benefits that domestic VC firms could accrue. Similarly, studies on joint ventures and internationalization have highlighted the benefits gained by foreign firms through organizational learning when interacting with domestic firms or institutions (Casillas & Moreno-Menendez, 2014; Dikova et al., 2010; Erkelens, Van den Hooff, Huysman, & Vlaar, 2015; Tan & Meyer, 2011; an exception is the work by Fang and Zou, 2010, which examines the joint benefits domestic and foreign firms experience). Our study thus complements these studies by suggesting the presence of mutual benefits in syndications between domestic and foreign VC firms. Moreover, our empirical setting allows us to examine a different context, without formal organization, and where the different parties interact in a syndicate that operates for a limited period.

BACKGROUND LITERATURE AND HYPOTHESES

Literature on VC syndication and organizational learning

VC syndication is an enduring characteristic of the VC industry (Dai & Nanda, 2016; Meuleman & Wright, 2011). In general, syndication allows VC firms to form interfirm alliances (Wright & Lockett, 2003). The literature on VC syndications documents that syndicates form to share risk (risk-sharing perspective) or to access valuable resources (resource-based perspective). The risk-sharing perspective (Lockett & Wright, 2001) argues that syndication helps mitigate information asymmetry and adverse selection problems. Additionally, agency problems generate well known costs that can be mitigated through active monitoring (Jensen & Meckling, 1976), which requires improved skills, or through syndication. By contrast, the resource-based perspective suggests that syndication prompts the sharing of resources among the VC firms (Hopp & Rieder, 2011).

Other studies, such as Grant (1996), Hamel (1991), Khanna, Gulati, and Nohria (1998), and Kogut (1998), have documented that alliance formation is crucial for future VC syndications. Broadly speaking, firms form alliances to gain a platform for organizational

learning, which provides access to their partners' knowledge. Through mutual interdependence, problem solving, and observation of alliance activities and outcomes, participating firms can learn from their partners (Inkpen, 1998). Inkpen (1998) finds that the formation of an alliance is an acknowledgment that one partner has useful knowledge that the other partner can use to enhance its own strategy and operations. This type of knowledge is valuable to the partner firm, even outside the specific terms of the alliance agreement, because it may be useful in future deals. Alliances between firms provide a better platform for organizational learning than do other contexts, thus resulting in risk reduction (Powell, 1987).

Several empirical studies (Dodgson, 1993; Inkpen & Crossan, 1995; Lane & Lubatkin, 1998) have addressed the importance of alliances in the learning process. More recently, various international business studies have acknowledged the importance of learning in international expansions and the acquisition of specific knowledge. Fang and Zou (2010) find that the stability of international joint ventures, dependent on both parties' absorptive capacity, is greatest when both have a learning capacity. Casillas and Moreno-Menendez (2014) find that the international experience diversity promotes the quality of the learning process. Last, Dikova et al. (2010) conclude that institutional differences across countries affect the likelihood of cross-border acquisitions being successfully completed and the duration of deal making. These authors further show that organizational learning moderates institutional differences. Other studies related to learning and internationalization (e.g., Erkelens et al., 2015; Gao & Pan, 2010; Jonsson & Foss, 2011) show that foreign players benefit by learning from domestically embedded knowledge, notably through the flexible replication of existing organizations by large multinational enterprises.

From the perspective of domestic VC firms, forming partnerships with foreign VC firms allows them to access heterogeneous knowledge and skills and gives them opportunities to learn from their partners (Wright & Lockett, 2003). Learning opportunities are important for

the VC firms considered here because the VC industry in Asia is rather young, underdeveloped and subject to high information asymmetry (Dai et al., 2012). The number of domestic VC firms is small, and they often operate on a small scale and are unlikely to provide much value-added advice to their portfolio companies (Bruton, Fried, & Manigart, 2005). Foreign VC firms, especially VC firms from North America and Europe, have gained relatively rich experience in their home countries, and their value-added is not restricted to capital but includes knowledge of portfolio selection and disinvestment decisions. By collaborating, the domestic VC firms can access the foreign VC firms' rich experience and expertise and acquire better knowledge about how to advise and nurture entrepreneurial firms; these factors lead to successful exits from portfolio companies.

Syndicate experience and investment selection

As noted, domestic VC firms often learn from their foreign partners during collaboration and use the knowledge in their follow-up investments. For example, the investment selection and focus of domestic VC firms might change as a result of foreign syndicate exposure. Foreign, well-established VC firms are more experienced in investing in early-stage, high-tech ventures. According to Cumming and Dai (2010), 64.3% of VC investments in the United States between 1980 and 2009 were in the information technology (IT) sector, compared with 18% in the medical sector and 18% in other sectors. By contrast, Dai et al. (2012) document that most of the VC investments in Asia between 1996 and 2006 were not made in technology-related sectors, and they were not early-stage investments. This finding suggests that Asian VC firms are attracted to nontechnology sectors or to ventures that are already showing potential rather than to early-stage investments. Together, this evidence indicates that Asian VC firms have limited experience in investing in high-tech industries and in selecting portfolio companies at the early stage of development. By working side-by-side with foreign VC firms that have extensive experience and knowledge of investing in

high-tech industries, domestic VC firms may be able to learn from their partners and acquire the necessary skills to deal with the information asymmetry. If so, the acquired knowledge will enable domestic VC firms to sharpen their investment selection skills and subsequently invest in all sectors and stages. These skills further help manage agency problems more efficiently (Jensen & Meckling, 1976; Haugen & Senbet, 1981). Therefore, we hypothesize that the domestic VC firms that have gained experience through syndication with foreign VC firms are more likely to invest in high-tech and early-stage ventures in the future.

Hypothesis 1: Domestic VC firms with past international syndication experience are more likely to invest in sectors or ventures with greater risk.

Syndicate experience and investment performance

Various studies have examined VC exits in different contexts (Elisabete, Cesaltina, & Mohamed, 2014; Giot & Schwienbacher, 2007), reporting that the characteristics of VC firms and investee companies influence the exit outcomes. In addition, VC syndication (Lerner, 1994; Megginson & Weiss, 1991), geographic distance, and cultural disparity (Cumming & Dai, 2010) influence a VC firm's exit from cross-border investments. Recent studies on Asian VC markets (Dai et al., 2012; Wang & Wang, 2012) find evidence that a joint venture or a partnership between foreign and domestic VC firms leads to better investment performance for the foreign VC firms. We propose that, if domestic VC firms gain knowledge by syndicating with foreign partners, their exit performance in subsequent deals should be better than the exit performance of domestic VC firms without international syndication experience. Thus, we postulate the following:

Hypothesis 2: Domestic VC firms with past international syndication experience have a higher likelihood of a successful exit in their investments.

DATA AND METHODOLOGY

Data and sample

We collected VC investment and exit data from the Asia Venture Capital Journal (AVCJ) database. The database provides adequate coverage of Asian deals. The AVCJ collects data by directly contacting, on a semiannual basis, more than 3,000 private equity or VC management firms located in the Asia-Pacific region. The company also conducts daily research on private equity and VC activities in the region by searching company websites, corporate announcements, press releases, and public news. Thus, the AVCJ database captures all types of deals without any size limitations. As such, the coverage of the AVCJ database in the Asia-Pacific region is better than that of many other databases, including VentureXpert.[3]

To construct our sample, we begin with all available VC investments in the AVCJ database, which includes 11,748 VC investments made by both foreign and domestic VC firms from 1990 to 2013 in Asia. We then restrict the sample to investments that received initial (first-round) funding between 1996 and 2009 because the globalization of VC only began to gather pace in the mid-1990s (Iriyama, Li, & Madhavan, 2010). We then track the outcome of each investment until the end of 2012, thus allowing at least three years in which to observe an exit for an investment made in late 2009 (see Nahata, 2008). Given our interest in investigating the impact on domestic VC firms, we include in our final sample only portfolio companies that received funding (in either the first round or any later round) from at least one domestic VC firm. To be included in the final sample, we further require that the exit date, investment size, and country of origin of the different VC firms involved are available. This filtration leads to a final sample of 3,309 investments in portfolio companies from 1996 to 2009. Our final sample includes VC investments in China, Hong Kong, India, Indonesia, Japan, Malaysia, Pakistan, the Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. These countries constitute the set of emerging countries for the determination of domestic VC firms. We define all the variables in Table 1 and discuss

[3] Table A1 in the Appendix provides a comparison of data representativeness between the AVCJ and other databases, including VentureXpert.

several in more detail later in the paper.

[INSERT TABLE 1 HERE]

Table 2 presents the descriptive statistics of the Asian VC market from 1990 to 2013 (i.e., the initial sample of 11,748 VC investments, not our final sample). Panel A shows the full sample of investments made in Asia, by country. In our sample, China and India attracted more than half the total capital invested in Asia. In terms of syndication (the last column in Panel A), the mean syndicate size ranges between three and five syndicate members, depending on the country. On average, across all countries, the syndicates held 4.16 members, which is similar in size to the US VC syndicates (see Espenlaub, Khurshed, & Mohamed, 2015, for recent statistics). Panel B shows that syndication takes place in approximately 30% (3,544 of 11,748) of the cases in Asia, while the remaining 70% (8,204 of 11.748) are nonsyndicated investments. Only 34.1% (1,207 of 3,544) of cases involve at least one foreign VC firm, while the remaining 65.9% only involve domestic VC firms. The participation of foreign VC firms varies, however, across countries. Most notably, investments with foreign VC firms as syndicate partners are overrepresented in China and India relative to the full sample of investments.

Panel C of Table 2 offers insights into the syndications formed between domestic and foreign VC firms, as well as a disaggregation into different types of foreign VC firms (Asian or Western VC firms). On average, 22.4% of investments that involve foreign syndicate partners are with Asian VC firms, and 77.6% are with Western VC firms. Overall, the results show that cross-border syndication within Asia is not as common as in Western countries, where more than half the investments are syndicated (Nahata, 2008).

[INSERT TABLE 2 HERE]

Measure of investment success

The dependent variable in our analysis of investment success (labeled *successful exit*) is a

dummy variable that takes the value 1 if the portfolio company (the venture) is exited by VC firms through an IPO or a trade sale by the end of 2012. We consider exits through IPOs or trade sales as successful because VC firms generate returns primarily by exiting through these two channels (Dai et al., 2012; Giot and Schwienbacher, 2007). Previous studies of VC firms have also used this measure of VC investment success (see Bottazzi, Da Rin, & Hellmann, 2008; Cumming & Dai, 2010; Dai et al., 2012; Dai & Nahata, 2016; Nahata, 2008; Zarutskie, 2010). Moreover, using real performance data, Phalippou and Gottschalg (2009) empirically show that using both exit routes as proxies for performance is better than using only the IPO route. For robustness, we also examine IPO and trade sale exits separately.

Measures of international syndicate experience

We are interested in measuring the impact of domestic VC firms' syndication experience with foreign VC firms on the former firms' subsequent investments. Following this objective, we construct three measures of experience that capture the extent to which domestic VC firms can learn from foreign VC firms.

Broad experience

Since our unit of observation is a portfolio company, we evaluate whether any of the participating domestic VC firms had international syndication experience at the time of the financing round. In the case of multiple domestic VC firms, we evaluate each firm separately. We use the initial sample of investments extracted from the database to obtain this information. For each deal in our final sample, the variable *broad experience (I)* is then a dummy variable that takes the value 1 if any of the domestic VC firms have participated in a syndicated deal with a foreign VC firm in the past, and 0 otherwise.[4]

Asian experience

This measure restricts the syndication experience with foreign VC firms to that with firms

[4] This dummy variable constitutes our primary measure. For robustness purposes, we also construct a continuous measure based on the number of foreign syndication experiences. For details, see Table 1.

located in another Asian country. Thus, the variable *Asian experience (I)* is a dummy variable that takes the value 1 if any of the domestic VC firms have syndicated in the past with a foreign Asian VC firm, and 0 otherwise. This measure is therefore more restrictive than the broad experience measure, since the latter considers any foreign syndication experience. By construction, *broad experience (I)* = 1 when *Asian experience (I)* = 1.

Western experience

We similarly construct a third dummy variable, *Western experience (I)*, which takes the value of 1 if any of the domestic VC firms have syndicated in the past with a Western (either North American or European) VC firm, and 0 otherwise. This measure is again more restrictive than the broad experience measure, so *broad experience (I)* = 1 when *Western experience (I)* = 1.

Control variables

The investment selection and performance are influenced by the VC firm and portfolio company characteristics. We therefore include several variables to control for the type of VC firms involved in the deal and the characteristics of the portfolio company. VC syndication is important because it can reduce the level of uncertainty and increase value-added (Megginson & Weiss, 1991; Giot & Schwienbacher, 2007). Recent studies on the Asian and Chinese markets (Dai et al., 2012; Wang & Wang, 2012) highlight the importance of VC syndication for investment performance. Therefore, we include a dummy variable (labeled *VC syndication*) that takes the value of 1 if the deal involves more than one VC firm (either another domestic or a foreign VC firm), and 0 otherwise. We also control for *VC portfolio size* because previous studies (Cumming et al., 2006) have found that portfolio size is negatively related to the likelihood of a successful exit. When more than one VC firm is involved (either another domestic or a foreign VC firm), this measure is the average portfolio size of the participating VC firms. We also include *VC-type dummies* to indicate that different types of VC firms (whether independent or corporate) are involved. In the case of syndicated

deals, more than one dummy variable can be equal to 1.

Next, we control for venture-related characteristics. We include dummy variables that indicate the stage of development at the time of investment. Specifically, we include early-stage, expansion-stage, and later-stage dummies in our analysis. Previous studies suggest that early-stage ventures are riskier than those at other stages and have a higher failure risk (Cochrane, 2005). The levels of information asymmetry and uncertainty are also higher for early-stage than for later-stage investments (Dai et al., 2012). In addition, we account for venture industry-specific fixed effects by including *industry dummies* in all our estimations. We include time-varying variables related to the country of the portfolio company to capture the possible macroeconomic effects of selection and investment performance. *Stock market development* measures the level of stock market development in the country of a portfolio company; we measure it as the stock market capitalization scaled by the gross domestic product. Previous studies (e.g., Black & Gilson, 1998) have shown that a well-developed market is extremely important to the development of the VC industry because it provides a viable exit mechanism for both investors and entrepreneurs. Stock market development is also undoubtedly important in the context of cross-border investments because VC firms are more likely to exit successfully the higher the level of stock market development (Jeng & Wells, 2000). The additional country-level variables used for various robustness checks include measures related to the quality of the legal environment and cultural differences between domestic and foreign VC firms. Finally, the other control variables include the *total rounds received*, to control for actual investment size; *portfolio company country dummies*, to control for unobservable country fixed effects; and *investment year dummies*, to control for unobservable temporal fixed effects.

ANALYSIS

Domestic VC firms' international syndicate experience

We now examine, in a univariate setting, the impact on investments by domestic VC firms by studying the changes in their investment behaviors (i.e., type of portfolio companies selected) and exit performance (i.e., propensity to exit successfully) before and after they gained international syndication experience. If domestic VC firms do learn from their foreign partners during syndication, we should find a significant change in both dimensions. The results are shown in Table 3. We define the year 0 as the year in which the domestic VC firms began syndicating with foreign VC firms. We then count the proportion of investments in the early stage, the first round of financing, high-tech industries, and successful exits (IPOs and trade sales combined) for each year. For example, if a domestic VC firm has invested in 2 deals in the early stage, 9 in expansion, and 11 in the later stage, we compute the proportion of early-stage investments as 2/22 (i.e., 0.091). We also calculate changes ("difference") in these values over different windows (i.e., –1 to +1, –3 to +3, and –5 to +5). The first three dimensions (early stage, first round, and high-tech) measure the investment risk, as ventures in the early stage of development (vs. expansion or later stage), in their first round (vs. follow-up rounds), and active in the high-tech sector tend to be the riskiest investments for VC. Carpenter and Petersen (2002) show that high-tech investments are generally skewed, riskier, and difficult to evaluate.

Panel A of Table 3 shows that domestic VC firms tend to invest more in early-stage ventures after they have acquired broad syndicate experience. Specifically, domestic VC firms with broad experience allocate 3.0–3.5% more of their investments annually to early-stage ventures. This change is primarily attributable to firms that have acquired international syndicate experience with Western VC firms, given that we only observe a statistically meaningful change in the case of Western experience (from 4.7% to 5.7%). Panel B shows the changes in the domestic VC firms' investments in first-round deals. Firms with broad experience tend to increase their investments in first-round deals by 2.7–8.0% across

the different windows. Again, this change in investment behavior is driven by domestic VC firms with Western experience, where the changes range from 5.9% to 12.3% annually. Panel C provides a similar picture for the changes in high-tech investments. In terms of economic magnitude, domestic VC firms tend to increase their investments in high-tech ventures by 7.9–11.4% after gaining foreign syndication experience. Although high-tech sectors might not be a good indication of investment risk, Roure and Keeley (1990) document that the risks and returns of high-tech sectors are higher than those for other sectors. Finally, Panel D shows that domestic VC firms with broad experience more often successfully exit their investments, as the percentages of successful exits increase by 0.8–8.5%. These results are consistent, regardless of the type of international syndication experience (Asian or Western).

Overall, the results in Table 3 show that the domestic VC firms tend to change their investment behavior after gaining syndication experience by increasing their risk exposure. This effect is mainly driven by international syndication experience with Western VC firms. Consistent with our predictions, these results indicate that there are benefits and positive learning effects for domestic VC firms, especially when they syndicate with Western VC firms.

[INSERT TABLE 3 HERE]

Investment selection

We now analyze the investment decisions of domestic VC firms at the portfolio company level. We examine our cross-sectional data set in which the unit of analysis is at the portfolio company level (i.e., one observation for each portfolio company). We use the logit regressions in Table 4 to examine the impact of domestic VC firms' international syndication experience (broad, Asian, or Western) on the likelihood of the domestic firms subsequently investing in "riskier" portfolio companies. To assess the riskiness of portfolio companies, we use three distinct measures, presented in Table 3 as follows: (1) whether the portfolio

company is an early-stage venture (the variable *early-stage venture*, our risk measure I) versus an expansion- or later-stage venture (Models 1–3), (2) whether it is a first-round investment for the portfolio company (*first-round investment*, our risk measure II) (Models 4–6), and (3) whether it is a venture in the high-tech sector (*high-tech*, our risk measure III) (Models 7–9). All three measures of past international syndicate experience (broad, Asian, and Western) have a positive impact on the likelihood of investing in early-stage rounds, participating in first-round investments, and investing in portfolio companies in high-tech sectors. Thus, domestic VC firms with past international syndicate experience invest in riskier deals in the future. These findings are economically meaningful. For example, broad experience increases the likelihood of investing in early-stage ventures by 8.7%, Asian experience increases the likelihood by 12.7%, and Western experience increases the likelihood by 23.2%. We obtain similar results with our second measure of risk (Models 4–6), with probability increases of 7.1%, 9.0%, and 18.9%, respectively. The approximately similar values across our different risk measures are consistent with the general observation that first-round investments are typically early-stage investments.

We find a systematically greater impact from Western experience than Asian experience, suggesting that domestic VC firms learn more from past syndication experiences with Western VC firms. Similarly, the results in Models 7–9 show that the likelihood of domestic VC firms investing in the high-tech sector is significantly higher for firms with Western experience than for firms with Asian experience. Thus, the learning effect is stronger for domestic VC firms when they accumulate experience through syndication with Western rather than Asian VC firms. The results from Table 4 provide support for Hypothesis 1, i.e., that domestic VC firms syndicating with foreign VC firms are more likely to invest in risky deals.

[INSERT TABLE 4 HERE]

Investment performance

We now examine the impact of international syndication experience on investment performance as measured by exits through IPOs or trade sales. The dependent variable is the dummy variable *successful exit* that takes the value of 1 if the portfolio company ultimately went public or was acquired by the end of 2012. The independent variables include the characteristics of the first round of financing. These variables are critical for VC firms, since they lay the foundation for subsequent investments (De Clercq, Fried, Lehtonen, & Sapienza, 2006; Fitza, Matusik, & Mosakowski, 2009).

Table 5 reports the results. In Models 1–3, we use the indicator variables used so far. In Models 4–6, we use the *number* of prior syndicated investments with foreign VC firms (broad, Asian, and Western) to offer additional insights into the learning process. The results of Models 1–3 show that domestic VC firms benefit from syndication experience with foreign VC firms. The likelihood of successful exits through IPOs and trade sales increases by 10.4% to 11.8% (depending on the specification considered), which is economically meaningful.

In Models 4–6, we find similar effects. However, the coefficients are only statistically significant at the 10% level, which is generally not strong enough to support coefficient tests for hypothesis testing. Thus, we conclude that, while international syndication experience matters, it is mainly a binary impact. That is, after the accumulation of some experience, extra experience does not materially affect the learning process. Overall, the results suggest that partnerships with foreign VC firms assist in professionalizing domestic VC firms; syndication can serve as a useful means of acquiring this knowledge. Domestic VC firms learn from foreign VC firms and acquire better knowledge for advising and nurturing entrepreneurs in future deals, leading to successful exits, which is consistent with Hypothesis 2.

The other control variables are also significant. VC syndication in the current deal

improves the success rate of the investment project[5], while the VC portfolio size is negatively related to the likelihood of successful exits. We find that the participation of corporate VC firms leads to better performance than the participation of independent VC firms. As expected, early- and expansion-stage investments are less likely than later-stage investments to be successfully exited. We also find that the total amount of financing received (*total rounds invested*) is positively related to the investment performance. In addition, we find that greater stock market development in the country where a portfolio company is located improves the likelihood of successful exits, suggesting that having a viable exit mechanism, such as an IPO, is important for both investors and entrepreneurs (consistent with the findings of Black & Gilson, 1998, for the United States).

[INSERT TABLE 5 HERE]

Impact of the legal system and cultural distance

So far, the results regarding investment selection (Table 4) and performance (Table 5) ignore the impacts of differences in legal systems and cultural differences. It is possible that the legal system in the country where the venture is located and cultural differences between domestic and foreign VC firms drive the likelihood of investment in risky deals and the ultimate performance. For example, Cumming et al. (2006) find that a more efficient legal system mitigates agency problems and transaction costs and, thus, facilitates VC exits, especially through IPOs. This observation is important, given the extensive literature in the finance field on agency problems that could explain risk-shifting incentives (see, for instance, Barnea et al., 1985, Jensen & Meckling, 1976, Haugen & Senbet, 1981). Similarly, Dai and Nahata (2016) show that cultural disparity reduces the syndicate size but helps improve the

[5] In an untabulated analysis, we evaluated whether the type of current VC syndication matters. In particular, VC syndication may involve foreign partners, which may then affect the performance in the same way as prior learning. Therefore, we divided the variable VC syndication into the following two separate variables: one variable for VC syndication with domestic VC firms and one variable for VC syndication with foreign VC firms. The two coefficients obtained were not statistically significantly different from each other. We thus conclude that the type of VC syndication in the current deal does not matter.

chances of a successful exit.

To determine whether our results remain robust to controlling for these alternative factors, we include the same measures in our specifications. For the quality of the legal system, we use the widely used index of "legality," consistent with Cumming et al. (2006). Following Dai and Nahata (2016), we quantify the cultural differences between the portfolio company and the VC firms using the four cultural dimensions of Hofstede, Hofstede, and Minkov (2010), who follow the approach of Kogut and Singh (1988). We obtain the data from Geert Hofstede's website (www.geerthofstede.nl) and use the Cartesian distance measure to calculate the cultural disparity. For cultural disparity, we compute the cultural distance between domestic and foreign VC firms and the portfolio company, following Dai and Nahata (2016).

Table 6 replicates Table 4 while adding the two extra variables (*legality* and *cultural distance*). The results show that cultural distance has no impact on the likelihood of risk taking. However, a better legal environment positively affects the likelihood of investing in risky deals. This evidence is consistent across the different risk measures. At the same time, the inclusion of the two additional variables does not affect our conclusions regarding foreign syndicate experience from Table 4, which supports the robustness of our results thus far.

[INSERT TABLE 6 HERE]

Some studies (e.g., Cumming et al., 2006, and Dai & Nahata, 2016) have also shown the importance of the legal environment and cultural differences for successful VC exits. These findings call for including these two measures in our exit performance analysis as well. Moreover, the performance may be driven by the investment objectives of the fund. We, therefore, calculate a third variable, denoted *small early-stage fund*, which captures whether the considered fund (1) belongs to the bottom 25th percentile of funds (in terms of fund size) in the industry and (2) is an early-stage investment. These investments are the riskiest. Thus,

we replicate in Table 7 the same specification as in Table 5 while including these three factors as extra control variables. Again, our findings on the impact of domestic VC firms' international syndication experience on exit performance remain robust even when controlling for the quality of the legal environment, cultural distance, and risk at a portfolio level.

[INSERT TABLE 7 HERE]

Finally, our measure of success included both IPO and trade sale exits. From the perspective of VC firms, an exit through an IPO is often considered more successful than an exit through a trade sale. Lerner (1994) documents that VC firms only take the most successful portfolio companies public, for reasons of reputation. In contrast, for exiting less successful companies, VC firms may use a trade sale. To examine the variations between IPO and trade sale exits, we separate our measure of successful exits into IPOs and trade sales, respectively. The results are reported in the Online Appendix. Compared with the baseline specifications in Table 5, the results are similar, but statistically less significant, when divided by exit route. As Phalippou and Gottschalg (2009) suggest, using both exit routes as a proxy for performance is better than using only IPO exits. Here, we obtain almost similar results in economic magnitude but lower results in terms of statistical significance when considering each exit route separately.

Endogeneity

Syndication

Endogeneity might be an issue for VC syndication in current deals. We find that syndication in previous deals increases the probability of successful exits for future deals. Dai and Nahata (2016) point out the possibility of VC syndication being influenced by other factors that are not exogenous to the probability of a successful exit. Indeed, it is highly likely that VC firms might be tempted to join an investment that is showing signs of good performance, in later

rounds. This action could potentially induce endogeneity problems. To address the endogeneity concerns for the variable *VC syndication* in the performance analysis, we use the instrumental probit model. In the first stage, we estimate the syndication variable as a function of various control variables, including our instrument. We use the number of VC firms in the syndicate as our instrumented variable. We construct an instrumental variable for the syndication that reflects the investment concentration within a VC firm's portfolio. Previous studies (Brander, Amit, & Antweiler 2002; Lockett & Wright 2001) have suggested that diversification is one of the motives for VC firms' syndication. A VC firm with a higher exposure to a specific industry would have a higher incentive to syndicate with other VC firms and achieve diversification. Following the syndication literature, we construct (similarly to Tian, 2012) an investment concentration index for each VC firm in each year based on AVCJ industry classification. The index measures by how much a VC firm's portfolio deviates in industry composition from a market portfolio consisting of all portfolio companies in which a VC firm could have invested. The index is equal to zero if the VC firm's portfolio has the same industry composition as the market portfolio, i.e., the same proportion of firms from each industry as the market portfolio and increases as the VC firm's portfolio becomes more concentrated in a few industries. The index is computed as follows: suppose that in year t, VC firm j has $w_{i,t,j}$ portfolio firms in industry i (scaled by the total number of portfolio firms in year t) and there is a total of $\overline{w}_{i,t}$ portfolio firms in industry i (also scaled by the total number of portfolio firms in year t). The *investment concentration index* of VC firm j in each year is defined as the sum of the squared deviations of $w_{i,t,j}$ from $\overline{w}_{i,t}$, as shown in the equation below:

$$Investment\,Concentration\,Index = \sum_{i=1}^{N-industry} \left(w_{i,t,j} - \overline{W}_{i,t} \right)^2 .$$

Our choice of *investment concentration index* is motivated by the fact that the index reflects the decision to invest in the portfolio company. The question of whether to syndicate or not is

made almost exclusively by the VC firms and not the portfolio company. Hence, the index is likely to influence the decision to syndicate and not directly influence the subsequent performance, which satisfies the exclusion criteria. Moreover, we rely on the work by Tian (2012), who find empirical support for this variable as a valid instrument.

In our second stage, we use the instrumented VC syndication measure in our exit performance equation. We use the Wald test of exogeneity to determine whether syndication is exogenous. However, we are not aware of any formal test of whether instruments are weak or strong when using the instrumental probit model. Therefore, we calculate the Stock-Yogo statistics using the linear IV regression. We further compute an F-test as an alternative test of whether the control variables in the first-stage equation (including our main variable of interest) are jointly significant.

Table 8, which reports the endogeneity results, shows that foreign syndication experience continues to have a positive impact on performance, even when we control for possible endogeneity. The Wald test does not reject the null hypothesis that syndication is exogenous, and the F-test shows that the control variables, including our instrument, have a significant impact on syndication. This evidence is consistent using the Stock-Yogo statistics for strong instruments. Thus, *investment concentration index* is a strong instrument, consistent with Tian (2012). We conclude that the results reported previously are not biased by the endogeneity of syndication.

[INSERT TABLE 8 HERE]

Accumulated international syndication experience

It is also possible that international syndication experience as measured by *broad*, *Asian*, and *Western experience* is endogenously determined, although these investments often occur long before the ultimate exit. However, endogeneity may arise in terms of investment choices. We, therefore, use the age of the domestic VC firm as an instrument for the broad, Asian, and

Western experience variables. The finding that the age of the domestic VC firm is a good instrument for experience is consistent with prior studies on VC, which show that VC firms accumulate experience over time (see Dai, Jo, & Kassicieh, 2012, among others). We again address the endogeneity concerns in two steps. Once again, we use the Wald test and F-test, and provide the Stock-Yogo statistics.

Table 9 reports the results on investment behavior, controlling for the endogeneity of international syndication experience. The results remain consistent with those reported in Table 6. Furthermore, we find no evidence that such syndication experience with foreign VC firms is endogenously determined.

[INSERT TABLE 9 HERE]

Propensity score matching

To further ensure that endogeneity is not driving our results, we use a Propensity Score Matching technique (Reeb, Sakakibara, & Mahmood, 2012) In our context, it allows to improve the comparability of the sample of domestic VC firms with international syndication experience to a sample of similar domestic VC firms without similar experience and so potentially obtain a more reliable comparison for our performance analysis. To conduct propensity score matching, we first select investments made by domestic VC firms who never syndicated with foreign VC firms in their subsequent investments. Next, we match each foreign and domestic syndicated investment with an equivalent domestic syndicated investment based on a propensity score estimated using VC firm age, VC portfolio size, financing stage, dummies for the presence of independent and corporate VC firms, and total amount received. Using caliper radius matching, we classify a foreign or a domestic VC investment as a match for a domestic syndicated investment only when the propensity scores for the two investments differ by no more than 5% (following, e.g., Dehejia & Wahba, 2002). Using the sample of matched observations, we estimate a logit model. Results are shown in

Table 10. We find that the experience coefficients (broad, Asian and Western) are lower than in our earlier analyses; however, they are still statistically and economically significant.

[INSERT TABLE 10 HERE]

Additional robustness checks

In this section, we report the additional robustness checks of our results. We address a sample selection bias that could arise from excluding portfolio companies financed only by foreign VC firms (i.e., where no domestic VC firm is participating). We use the two-stage Heckman selection model to address this concern. In the first stage, we use the probit model in the selection equation to estimate the likelihood of an investment having only foreign investors. The "control" group comes from the AVCJ database, which contains 3,950 investments made only by foreign VC firms during the 1996–2009 period. In the selection model, we also include control variables used in the main regression and control for industry, country, and year fixed effects. The results are consistent with our previous findings. The inverse Mills ratio is also not significant at any conventional level, suggesting there is no selection bias.

Next, we incorporate the conclusions of Chircop, Johan, and Tarsalewska (2017), who find, in the context of mergers and acquisitions (which include trade sales), that the use of common auditors by the bidders positively affects performance. We therefore adopt their methodology and include a dummy variable in our performance analysis that controls for the presence of common auditors. Consistent with Chircop et al. (2017), we find that common auditors have a positive impact on exit performance, but this impact is only significant at the 10% level. However, this dummy variable does not affect our conclusions on the impact of foreign syndicate experience. Further, we consider the possibility that VC firms' use of different VC funds to invest in portfolio companies affect performance. This situation happens in approximately 3% of our deals. We find a positive impact on performance, but the

evidence is statistically weak.[6]

CONCLUSIONS

Previous studies document that syndication with domestic VC partners is an effective way for foreign VC firms to alleviate the information asymmetry arising from cultural, legal, and geographic distance. This study extends the previous literature on VC finance and organizational learning by examining the benefits of syndication from the perspective of domestic VC firms. We show that domestic VC firms are more likely to invest in early-stage ventures and high-tech industries after gaining syndication experience with foreign VC partners, specifically those from North America and Europe. The results also show that international syndication experience improves the domestic VC firms' investment performance. We, therefore, conclude that domestic VC firms learn from their foreign partners, and the knowledge and skills acquired during the international syndication not only give them the confidence to invest more in riskier ventures but also improve their subsequent investment decisions.

This study provides at least two practical implications for market practitioners and policy makers. First, as part of their growth strategy, domestic VC firms should seek foreign partners to invest in syndicated deals with them. This is especially crucial at the very beginning, when learning from peers is most valuable. This can accelerate their own growth and thus ensure that they will be successful. Second, the learning effect for domestic VC firms is more pronounced when their partner firms are from North America and Europe rather than other parts of the world. This additional result may stem from either the greater difference in how to deal with VC investments or from the increased experience of VC firms located there. Domestic VC firms may contribute to the organizational learning by adopting an open view

[6] Another factor that could affect exit outcomes in Asia is state ownership (Wang, Jiao, Xu, & Yang, 2018). In some Asian countries, state ownership offers useful political connections that may facilitate the IPO process. Unfortunately, we are not able to obtain this information for our sample, except for some of the Chinese ventures. We, therefore, could not test this alternative factor.

on inviting foreign VC firms in targeted deals, as they will benefit from these syndications. This may further foster access to other deals identified by foreign VC firms in other markets. Our data show that this organizational learning has taken place in many Asian VC firms already, suggesting they have understood the potential resulting from international syndication.

Policymakers should promote syndication between domestic and foreign VC firms. This requires that policymakers in many of the Asian countries considered facilitate access of foreign VC firms to the domestic market. The literature offers several insights on how foreign VC investments in domestic markets can be facilitated, including reducing legal barriers and adopting international practices (Aizenman & Kendall, 2012; Cumming et al., 2016; Dai et al., 2016; Dai & Nahata, 2016; Wang & Wang, 2012). Eventually, this will help Asian VC markets to professionalize further and innovative startups located in Asia to receive more early-stage financing and valuable advice for their development.

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Table 1 Definition of variables

Variable name	Definition of variable
Broad experience (I)	A dummy variable that takes the value 1 if the investing domestic VC firm has previously participated in at least one syndicated deal that involved a foreign VC firm, and 0 otherwise. In the case of multiple domestic VC firms within a syndicate, the variable equals 1 if at least one of them has such syndicate experience.
Asian experience (I)	A dummy variable that takes the value 1 if the investing domestic VC firm has previously participated in at least one syndicated deal that involved a foreign VC firm from another Asian country, and 0 otherwise. In the case of multiple domestic VC firms within a syndicate, the variable equals 1 if at least one of them has such syndicate experience.
Western experience (I)	A dummy variable that takes the value 1 if the investing domestic VC firm has previously participated in at least one syndicated deal that involved a Western (either North American or European) VC firm, and 0 otherwise. In the case of multiple domestic VC firms within a syndicate, the variable equals 1 if at least one of them has such syndicate experience.
Broad experience	The logarithm of the cumulative number of investments a domestic VC firm has previously participated in that involved a foreign VC firm. In the case of multiple domestic VC firms within a syndicate, the variable takes the logarithm of the cumulative number of previous investments of all domestic VC firms.
Asian experience	The logarithm of the cumulative number of investments a domestic VC firm has previously participated in that involved a foreign VC firm from another Asian country. In the case of multiple domestic VC firms within a syndicate, the variable takes the logarithm of the cumulative number of previous investments of all domestic VC firms.
Western experience	The logarithm of the cumulative number of investments a domestic VC firm has previously participated in that involved a Western (either North American or European) VC firm. In the case of multiple domestic VC firms within a syndicate, the variable takes the logarithm of the cumulative number of previous investments of all domestic VC firms.
Successful exit	A dummy variable that takes the value 1 if the investee company has been exited via an IPO or a trade sale by the end of 2012, and 0 otherwise.
Early-stage venture	A dummy variable that takes the value 1 if the portfolio company is in the early stage of development when it receives its initial VC funding, and 0 otherwise. This variable represents our Risk measure I in our analysis.
Expansion-stage venture	A dummy variable that takes the value 1 if the portfolio company is in the expansion stage of development when it receives its initial VC funding, and 0 otherwise.
Small early-stage fund	A dummy variable that takes the value 1 if the domestic VC firm's portfolio size is in the bottom 25th percentile and the current financing round of the portfolio company is in the early stage of development, and 0 otherwise.
First-round investment	A dummy variable that takes the value 1 if it is the first round of VC investment for the portfolio company, and 0 otherwise. This variable represents our Risk measure II in our analysis.
High-tech	A dummy variable that takes the value 1 if the portfolio company is in a high-tech industry (i.e., computer-related, IT, medical/healthcare, or telecommunications). This classification is consistent with that of Dai et al. (2012). This variable represents our Risk measure III in our analysis.
VC syndication	A dummy variable that takes the value 1 if the round involves more than one VC firm (i.e., domestic or foreign), and 0 otherwise.
VC portfolio size	The logarithm of the number of portfolio companies in the VC firm's portfolio at the time of investment. For syndicated deals, we use the average portfolio size of all the domestic and foreign VC firms involved.
Independent VC	A dummy variable that takes the value 1 if there is at least one independent VC firm (whether domestic or foreign) that is investing in the portfolio company, and 0 otherwise.
Corporate VC	A dummy variable that takes the value of 1 if there is at least one corporate VC firm (whether domestic or foreign) that is investing in the portfolio company, and 0 otherwise.
Total rounds received	The total number of rounds the portfolio company has received before exit.
Stock market development	The total market capitalization of the stock market in a particular year (scaled by gross domestic product) in the country of the portfolio company.

Cultural distance	A measure of cultural distance between the portfolio company and the VC firms based on the four Hofstede measures of culture (i.e., power distance, individualism, masculinity, and uncertainty avoidance), as used in Dai and Nahata (2016) and Kogut and Singh (1988). The data come from Geert Hofstede's website (www.geerthofstede.nl). The following Cartesian distance measure is used to calculate cultural distance: $Cultural\ distance = \frac{\left[\sum_{i=1}^{4}(C_{company\ i} - C_{VC\ firm\ i})^2\right]^{\frac{1}{2}}}{4}$, where $C_{company\ i}$ is the domestic portfolio company's culture based on measure *i* and $C_{VC\ firm\ i}$ is the culture measure of the domestic/foreign VC firm based on the same measure *i.*
Legality	A measure of the quality of the legal system in the country of the portfolio company (following Berkowitz et al., 2003).
Investment concentration index	This index measures by how much a VC firm's portfolio deviates in industry composition from a market portfolio consisting of all portfolio companies in which a VC firm could have invested. More details on the exact calculation is provided in the Analysis Section.
VC experience	Age in years of the domestic VC firm

Table 2 VC investments in Asia, 1990–2013

Panel A: Number of investments, capital invested, and syndicate size						
	No. of investments		Total capital received		Mean round size	Mean syndicate
	N	%	$M	%	$M	(#)
China (PRC)	4,419	37.6	920.34	34.4	1.12	3.95
Japan	2,924	24.9	629.06	23.5	0.50	4.92
India	1,990	16.9	486.97	18.2	1.10	3.70
South Korea	948	8.1	247.96	9.3	0.77	3.48
Singapore	373	3.2	75.10	2.8	0.96	4.16
Hong Kong	277	2.4	52.63	2.0	0.97	4.46
Taiwan	214	1.8	69.52	2.6	1.09	5.03
Other	639	5.4	193.19	7.2	0.75	3.54
Total/***Average***	11,748	100.0	***334.34***	100.0	***0.91***	***4.16***

Panel B: Syndicated investments						
	No. of syndicated investments		No. of syndicated investments with foreign VC firms		No. of syndicated investments without foreign VC firms	
	N	%	N	%	N	%
China (PRC)	1,491	42.1	563	46.6	928	39.7
Japan	846	23.9	103	8.5	743	31.8
India	535	15.1	271	22.5	264	11.3
South Korea	270	7.6	64	5.3	206	8.8
Singapore	154	4.3	94	7.8	60	2.6
Hong Kong	95	2.7	48	4.0	47	2.0
Taiwan	59	1.7	30	2.5	29	1.2
Other	94	2.7	34	2.8	60	2.6
Total	3,544	30.2	1,207	34.1	2,337	65.9

Panel C: Syndicated investments between domestic and foreign VC firms						
	No. of syndicated investments with foreign VC firms		No. of syndicated investments with Asian VC firms		No. of syndicated investments with Western VC firms	
	N	%	N	%	N	%
China (PRC)	563	46.6	131	48.5	432	46.1
Japan	103	8.5	28	10.4	75	8.0
India	271	22.5	27	10.0	244	26.0
South Korea	64	5.3	27	10.0	37	3.9
Singapore	94	7.8	28	10.4	66	7.0
Hong Kong	48	4.0	13	4.8	35	3.7
Taiwan	30	2.5	11	4.1	19	2.0
Other	34	2.8	8	3.0	26	2.8
Total	1,207	34.1	270	22.4	937	77.6

This table presents the basic statistics on the investments (at the round level) made by foreign and domestic VC firms in the following Asian countries: China (PRC), Japan, India, South Korea, Singapore, Hong Kong, Taiwan, and Other (Vietnam, Malaysia, Thailand, Indonesia, the Philippines, and Pakistan). Panel A describes the number of investments, total capital invested, mean investment size, and mean syndicate size in each country. Panel B describes the overall VC syndication in the Asian countries. Panel C describes only the syndication between domestic and foreign VC firms.

Table 3 Domestic VC firms' investment activities before and after foreign syndication

	Broad experience				Asian experience				Western experience			
	Before	After	Difference	*P-value*	Before	After	Difference	*P-value*	Before	After	Difference	*P-value*
Panel A: Change in early-stage investments												
Change over (–1, +1)	0.089	0.118	0.030	0.027	0.113	0.102	-0.011	0.574	0.100	0.147	0.047	0.005
Change over (–3, +3)	0.116	0.149	0.033	0.024	0.158	0.127	-0.032	0.133	0.125	0.181	0.057	0.001
Change over (–5, +5)	0.125	0.159	0.035	0.020	0.164	0.130	-0.034	0.105	0.137	0.190	0.054	0.003
Panel B: Change in first-round investments												
Change over (–1, +1)	0.134	0.160	0.027	0.031	0.156	0.148	-0.008	0.341	0.160	0.219	0.059	0.001
Change over (–3, +3)	0.179	0.222	0.043	0.017	0.216	0.193	-0.023	0.061*	0.183	0.299	0.116	0.000
Change over (–5, +5)	0.170	0.250	0.080	0.001	0.225	0.215	-0.010	0.229	0.200	0.323	0.123	0.000
Panel C: Change in high-tech investments												
Change over (–1, +1)	0.104	0.183	0.079	0.000	0.145	0.138	-0.008	0.718	0.124	0.221	0.097	0.000
Change over (–3, +3)	0.136	0.242	0.107	0.000	0.169	0.185	0.017	0.499	0.158	0.285	0.127	0.000
Change over (–5, +5)	0.144	0.258	0.114	0.000	0.178	0.208	0.031	0.211	0.168	0.296	0.128	0.000
Panel D: Change in successful exits												
Change over (–1, +1)	0.011	0.018	0.008	0.273	0.037	0.021	0.016	0.137	0.007	0.016	0.010	0.143
Change over (–3, +3)	0.012	0.058	0.046	0.000	0.020	0.069	0.050	0.001	0.017	0.059	0.043	0.001
Change over (–5, +5)	0.013	0.098	0.085	0.000	0.018	0.094	0.076	0.000	0.017	0.089	0.072	0.000

This table presents the statistics on the domestic VC firms' investment activities before and after foreign syndication. We define the year of their first foreign syndication as year 0 and calculate the proportion of investments in the early stage, those in the first round, those with successful exits, and high-tech investments in different years. The results are reported over the windows (–1,+1), (–3,+3), and (–5,+5), respectively. We calculate the changes as the difference between the averages before and after foreign-syndication periods. Panel A shows the changes in the early-stage investments (*early-stage venture*), Panel B shows those in the first-round investments (*first-round investment*), Panel C shows those in high-tech investments (*high-tech*), and Panel D shows those in investments with successful exits (*successful exit*). All the experience variables are defined in Table 1.

Table 4 Investment selection and foreign syndicate experience

$Ln[p/(1-p)] = \beta_0 + \beta_1$(Broad-experience;Asian-experience;Western-experience) + βControl-variables + Year & Country + ϵ

	Risk measure I: *Early-stage Venture*			***Risk measure II:*** *First-round Investment*			***Risk measure III:*** *High-tech*		
Dependent variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Foreign syndicate experience									
Broad experience (I)	0.0870			0.0712			0.0442		
	(0.000)			(0.000)			(0.006)		
Asian experience (I)		0.1270			0.0897			0.0276	
		(0.000)			(0.000)			(0.068)	
Western experience (I)			0.2302			0.1893			0.1432
			(0.000)			(0.000)			(0.007)
Control variables									
VC syndication	0.1151	0.1110	0.1110	0.0455	0.0439	0.0438	0.0239	0.023	0.023
	(0.000)	(0.000)	(0.000)	(0.006)	(0.007)	(0.007)	(0.034)	(0.046)	(0.045)
VC portfolio size	-0.0552	-0.0603	-0.0609	-0.0233	-0.0251	-0.0250	-0.0086	-0.0109	-0.0107
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.025)	(0.028)	(0.030)
Independent VC	0.0150	0.0135	0.0139	0.0003	0.00173	0.00143	0.0051	0.0043	0.0045
	(0.471)	(0.517)	(0.504)	(0.985)	(0.900)	(0.917)	(0.730)	(0.764)	(0.755)
Corporate VC	0.0782	0.0780	0.0786	0.0854	0.0855	0.0861	0.0030	0.0032	0.0034
	(0.007)	(0.006)	(0.006)	(0.000)	(0.000)	(0.000)	(0.865)	(0.856)	(0.847)
Total rounds received	0.3311	0.3280	0.3272	0.0470	0.0434	0.0437	0.0535	0.0513	0.0515
	(0.000)	(0.000)	(0.000)	(0.062)	(0.085)	(0.082)	(0.042)	(0.044)	(0.049)
Stock market development	0.0094	0.0099	0.0100	0.0081	0.0078	0.0077	0.0017	0.0012	0.0012
	(0.442)	(0.413)	(0.410)	(0.377)	(0.399)	(0.404)	(0.339)	(0.282)	(0.482)
No. of observations	3,309	3,309	3,309	3,309	3,309	3,309	3,309	3,309	3,309
Pseudo-R^2	0.221	0.224	0.217	0.232	0.228	0.226	0.196	0.199	0.020

This table presents the multivariate analyses of domestic VC firms' investment choices. We use logit regressions in all the models. The dependent variable in Models 1–3 is a dummy variable that takes the value 1 if the investment is in the early stage, and 0 otherwise. The dependent variable in Models 4–6 is a dummy variable that takes the value 1 for first-round investments, and 0 otherwise. The dependent variable in Models 7–9 is a dummy variable that takes the value 1 if the venture is in a high-tech industry, and 0 otherwise. All the variables are defined in Table 1. We report marginal effects in all models, rather than raw coefficients. All regressions include year and country fixed effects. The standard errors in our regressions are clustered by the industry of the portfolio company. P-values are reported in parentheses below the marginal effects.

Table 5 Investment performance and foreign syndicate experience

$Ln[p/(1-p)] = \beta_0 + \beta_1$(Broad-experience;Asian-experience;Western-experience) + βControl-variables + Year & Country + ϵ

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Foreign syndicate experience						
Broad experience (I)	0.1041	-	-	-	-	-
	(0.004)	-	-	-	-	-
Asian experience (I)	-	0.1175	-	-	-	-
	-	(0.002)	-	-	-	-
Western experience (I)	-	-	0.1040	-	-	-
	-	-	(0.007)	-	-	-
Broad experience	-	-	-	0.0558	-	-
	-	-	-	(0.052)	-	-
Asian experience	-	-	-	-	0.0565	-
	-	-	-	-	(0.084)	-
Western experience	-	-	-	-	-	0.0506
	-	-	-	-	-	(0.088)
Control variables						
Early-stage venture	-0.1592	-0.1521	-0.1550	-0.1561	-0.1540	-0.1512
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Expansion-stage venture	-0.1994	-0.1962	-0.2031	-0.2038	-0.1992	-0.2030
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
VC syndication	0.1346	0.1391	0.1382	0.1344	0.1422	0.1382
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
VC portfolio size	-0.0239	-0.0222	-0.0220	-0.0210	-0.0203	-0.0204
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Independent VC	-0.0078	-0.0002	-0.0011	-0.0081	-0.0006	-0.0064
	(0.907)	(1.011)	(0.877)	(0.946)	(1.020)	(0.892)
Corporate VC	0.1128	0.1058	0.1020	0.1025	0.1110	0.1005
	(0.008)	(0.012)	(0.008)	(0.011)	(0.012)	(0.012)
Total rounds received	0.2618	0.2579	0.2617	0.2704	0.2687	0.2715
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Stock market development	0.0063	0.0053	0.0063	0.0063	0.0064	0.0063
	(0.016)	(0.019)	(0.014)	(0.016)	(0.016)	(0.014)
No. of observations	3309	3309	3309	3309	3309	3309
Pseudo-R^2	0.209	0.209	0.212	0.213	0.211	0.211

This table presents an analysis of domestic VC firms' investment performance. We use logit regressions to investigate whether past foreign syndicate experience influences current domestic VC firms' investment performance in terms of the likelihood of a successful exit. The dependent variable in all models is the dummy variable *successful exit*. In Models 1–3, we use dummy variables of our experience measures as proxies. In Models 4–6, we use alternative, continuous proxies of experience. All the variables are defined in Table 1. All regressions include year and country fixed effects. P-values are reported in parentheses below the marginal effects.

Table 6 Investment selection and foreign syndicate experience: Legality and cultural distance
$Ln[p/(1-p)] = \beta_0 + \beta_1$(Broad-experience;Asian-experience;Western-experience) + βControl-variables + Year & Country + ϵ

	Risk measure I: Early-stage venture			***Risk measure II:*** First-round investment			***Risk measure III:*** High-tech		
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Foreign syndicate experience									
Broad experience (I)	0.0870			0.0712			0.0442		
	(0.000)			(0.000)			(0.006)		
Asian experience (I)		0.127			0.0897			0.0276	
		(0.000)			(0.000)			(0.068)	
Western experience (I)			0.232			0.1893			0.1432
			(0.000)			(0.000)			(0.007)
Control variables									
Legality	0.0097	0.0082	0.0080	0.0419	0.0423	0.0423	0.0263	0.0256	0.0256
	(0.652)	(0.703)	(0.709)	(0.095)	(0.090)	(0.089)	(0.127)	(0.135)	(0.135)
Cultural distance	-0.0098	-0.0093	-0.0092	-0.0112	-0.0113	-0.0111	-0.0028	-0.0028	-0.0029
	(0.669)	(0.686)	(0.687)	(0.485)	(0.482)	(0.489)	(0.874)	(0.875)	(0.872)
VC syndication	0.0342	0.02013	0.0211	0.0316	0.0202	0.0233	0.0239	0.0230	0.0230
	(0.085)	(0.144)	(0.122)	(0.071)	(0.128)	(0.140)	(0.074)	(0.146)	(0.145)
VC portfolio size	-0.0552	-0.0603	-0.0609	-0.0233	-0.0251	-0.0250	-0.0086	-0.0109	-0.0107
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.025)	(0.028)	(0.030)
Independent VC	0.0150	0.0135	0.0139	-0.0003	-0.0017	-0.0014	0.005	0.00433	0.00449
	(0.471)	(0.517)	(0.504)	(0.985)	(0.900)	(0.917)	(0.730)	(0.764)	(0.755)
Corporate VC	0.0782	0.0780	0.0786	0.0854	0.0855	0.0861	0.00306	0.00325	0.00346
	(0.007)	(0.006)	(0.006)	(0.000)	(0.000)	(0.000)	(0.865)	(0.856)	(0.847)
Total rounds received	0.3310	0.3280	0.3270	0.0470	0.0434	0.0437	0.0535	0.0513	0.0515
	(0.000)	(0.000)	(0.000)	(0.062)	(0.085)	(0.082)	(0.042)	(0.050)	(0.049)
Stock market development	0.0093	0.0098	0.0101	0.0082	0.0078	0.0076	0.017	0.0123	0.0124
	(0.441)	(0.414)	(0.411)	(0.378)	(0.397)	(0.405)	(0.839)	(0.882)	(0.882)
No. of observations	3,309	3,309	3,309	3,309	3,309	3,309	3,309	3,309	3,309
Pseudo-R^2	0.222	0.223	0.218	0.231	0.229	0.225	0.226	0.221	0.231

This table presents the multivariate analyses of domestic VC firms' investment choices, extending the analysis in Table 5 by including controls for the quality of the legal environment (*legality*) and the cultural distance between the venture and the VC firms (*cultural distance*). We use logit regressions in all models. The dependent variable in Models 1–3 is the dummy variable *early-stage venture*. The dependent variable in Models 4–6 is the dummy variable *first-round investment*. The dependent variable in Models 7–9 is the dummy variable that *high-tech*. All the variables are defined in Table 1. We report marginal effects in all models, rather than raw coefficients. All regressions include year and country fixed effects. P-values are reported in parentheses below the marginal effects.

Table 7 Investment performance and foreign syndicate experience: Legality and cultural distance

$Ln[p/(1-p)] = \beta_0 + \beta_1$(Broad-experience;Asian-experience;Western-experience) + βControl-variables + Year & Country + ϵ

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Foreign syndicate experience						
Broad experience (I)	0.0974	-	-	0.0843	-	-
	(0.035)	-	-	(0.018)	-	-
Asian experience (I)	-	0.0993	-	-	0.0867	-
	-	(0.042)	-	-	(0.019)	-
Western experience (I)	-	-	0.1017	-	-	0.0893
	-	-	(0.047)	-	-	(0.016)
Control variables						
Early-stage venture	-0.1961	-0.1970	-0.1970	-	-	-
	(0.000)	(0.000)	(0.000)	-	-	-
Expansion-stage venture	-0.1501	-0.1510	-0.1510	-	-	-
	(0.000)	(0.000)	(0.000)	-	-	-
Small early-stage fund	-	-	-	-0.0883	-0.0885	-0.0887
	-	-	-	(0.000)	(0.000)	(0.000)
Legality	0.0816	0.0816	0.0815	0.0867	0.0866	0.0865
	(0.005)	(0.005)	(0.005)	(0.002)	(0.002)	(0.002)
Cultural distance	0.0168	0.0167	0.0168	0.0248	0.0247	0.0248
	(0.468)	(0.471)	(0.469)	(0.285)	(0.287)	(0.285)
VC syndication	0.1371	0.1382	0.1383	0.1451	0.1461	0.1463
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
VC portfolio size	-0.0214	-0.0201	-0.0200	-0.0154	-0.0144	-0.0143
	(0.000)	(0.000)	(0.000)	(0.008)	(0.012)	(0.011)
Independent VC	-0.0084	-0.0085	-0.0083	-0.0083	-0.0084	-0.0084
	(0.622)	(0.620)	(0.620)	(0.636)	(0.631)	(0.631)
Corporate VC	0.0945	0.0833	0.0926	0.0877	0.0884	0.0976
	(0.026)	(0.041)	(0.035)	(0.035)	(0.044)	(0.027)
Total rounds received	0.2651	0.2661	0.2661	0.2431	0.2442	0.2441
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Stock market development	0.0032	0.0025	0.0033	0.0031	0.0032	0.0027
	(0.012)	(0.022)	(0.032)	(0.037)	(0.018)	(0.028)
No. of observations	3,309	3,309	3,309	3,309	3,309	3,309
Pseudo-R^2	0.2531	0.2741	0.2351	0.2431	0.2511	0.2132

This table presents an analysis of domestic VC firms' investment performance, extending the analysis in Table 4 by including controls for the quality of the legal environment (*legality*) and the cultural distance between the venture and the VC firms (*cultural distance*). We use logit regressions to investigate whether past foreign syndicate experience influences current domestic VC firms' investment performance in terms of the likelihood of a successful exit. The dependent variable in all models is the dummy variable *successful exit*. All the variables are defined in Table 1. All regressions include year and country fixed effects. P-values are reported in parentheses below the marginal effects.

Table 8 Investment performance – Endogeneity

***Stage I*: Ln(Number of VC firms syndicated) = β_0 + β_1Investment-concentration-index + βControl-variables + Year & Country + ϵ**

***Stage II*: Ln[p/(1-p)] = β_0 + β_1(Broad-experience;Asian-experience;Western-experience) + β_2VC-syndication (Instrumented) + βControl-variables + Year & Country + ϵ**

	First stage regressions	Second stage regressions		
Variables		Model 1	Model 2	Model 3
Foreign syndicate experience				
Broad experience (I)		0.0977	-	-
Asian experience (I)		-	0.0904	-
Western experience (I)		-	-	0.1062
Investment concentration index	0.6141			
VC syndication (Instrumented)		0.1602	0.1296	0.1462
Control variables				
Small early-stage fund	-0.0840	-0.1423	-0.1475	-0.1422
Legality	0.0267	0.0504	0.0513	0.0502
Cultural distance	0.0132	0.0197	0.0191	-0.0192
VC portfolio size	-0.0372	-0.0563	-0.0291	-0.0375
Independent VC	0.0114	0.0184	0.0189	0.0187
Corporate VC	0.0836	0.1212	0.1289	0.1243
Total rounds received	0.1642	0.3158	0.3141	0.3058
Stock market development	0.0047	0.0069	0.0057	0.0056
No. of observations	3309	3309	3309	3309
Adjusted R^2 /Pseudo-R^2	0.1841	0.2120	0.2120	0.2121
Wald test of exogeneity (χ^2)		2.08	1.65	1.32
Wald test of exogeneity (p-value)		(0.121)	(0.194)	(0.224)
Stock-Yogo statistics critical value 10%		12.57	10.59	13.25
F-test	57.44	57.44	48.89	55.23
F-test (p-value)	(0.000)	(0.000)	(0.000)	(0.000)

This table presents an analysis of domestic VC firms' investment performance, controlling for the endogenous decision to syndicate. See the "Endogeneity" section for details on the methodology. We use instrumental probit regressions to investigate whether VC syndicate experience (i.e., the variable *VC syndication*) influences domestic VC firms' investment performance in terms of the likelihood of a successful exit. The dependent variable in all models is the dummy variable *successful exit*. The Wald test of exogeneity tests whether past syndication is exogenous, while the F-test is a joint test of weak or strong instruments. The values of the Stock-Yogo statistics are obtained using IVREG in STATA. All the variables are defined in Table 1. We report marginal effects instead of coefficients. All regressions include year and country fixed effects. P-values are reported in parentheses below the marginal effects.

Table 9 Investment selection – Endogeneity

***Stage I*: Ln[Cumulative number of (Broad experience; Asian experience; Western-experience)] = $\beta_0 + \beta_1$VC-experience + βControl-variables + Year & Country + ϵ**

***Stage II*: Ln[p/(1-p)] = $\beta_0 + \beta_1$(Broad (Instrumented);Asian (Instrumented);Western-experience (Instrumented))+βControl-variables +Year & Country + ϵ**

				Risk measure I: *Early-stage venture*			***Risk measure II:*** *First-round investment*			***Risk measure III:*** *High-tech*		
Dependent variable	First stage (Broad)	First Stage (Asia)	First Stage (Western)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Investment selection												
Broad experience (Instrumented)				0.1088			0.0854			0.0588		
Asian experience (Instrumented)					0.1676			0.1112			0.0356	
Western experience (Instrumented)						0.2877			0.2309			0.1876
VC Experience (Age)	0.3051	0.4117	0.4221									
Control variables												
Legality	0.0068	0.0066	0.0050	0.0113	0.0098	0.0091	0.0499	0.0508	0.0470	0.0313	0.0307	0.0300
Cultural distance	-0.0072	-0.0061	-0.0072	-0.0116	-0.0105	-0.0104	-0.0131	-0.0124	-0.0132	-0.0032	-0.0033	-0.0035
VC syndication	0.0252	0.0164	0.0124	0.0393	0.0234	0.0238	0.0379	0.0226	0.0280	0.0275	0.0258	0.0260
VC portfolio size	-0.0413	-0.0421	-0.0348	-0.0646	-0.0669	-0.0670	-0.0270	-0.0284	-0.0295	-0.0095	-0.0125	-0.0127
Independent VC	0.0101	0.0107	0.0102	0.0174	0.0162	0.0167	-0.0004	-0.0020	-0.0016	0.0060	0.0051	0.0050
Corporate VC	0.0544	0.0445	0.0484	0.0938	0.0889	0.0880	0.0999	0.1017	0.0973	0.0034	0.0038	0.0041
Total rounds received	0.2246	0.2380	0.2200	0.3873	0.3838	0.3859	0.0517	0.0490	0.0516	0.0599	0.0600	0.0567
Stock market	0.0062	0.0076	0.0063	0.0110	0.0114	0.0115	0.0098	0.0087	0.0085	0.0189	0.0139	0.0136
No. of observations	3309	3309	3309	3309	3309	3309	3309	3309	3309	3309	3309	3309
Adjusted R^2 /Pseudo-R^2	0.188	0.1921	0.1914	0.201	0.202	0.212	0.214	0.231	0.226	0.229	0.222	0.234
Stock-Yogo statistics critical value 10%				18.45	22.76	22.43	23.51	21.15	19.04	19.66	18.62	20.17
Wald test of exogeneity				1.98	1.91	2.54	2.01	1.92	2.01	1.95	1.87	2.07
F-test				48.11	57.44	57.31	58.02	55.44	50.11	51.22	48.64	52.41

This table presents an analysis of domestic VC firms' investment selection, controlling for the endogenous decision to syndicate. We use an instrumental probit model to address endogeneity. The dependent variables are as defined in Table 4. The variables *broad experience*, *Asian experience*, and *Western experience* are the instrumented variables. The Wald test of exogeneity tests whether syndication is exogenous, while the F-test is a joint test of weak or strong instruments. The values of the Stock-Yogo statistics are obtained using IVREG in STATA. All the variables are defined in Table 1. We report marginal effects instead of coefficients. All regressions include year and country fixed effects. P-values are reported in parentheses below the marginal effects.

Table 10 Investment performance and propensity score matching

$Ln[p/(1-p)] = \beta_0 + \beta_1$(Broad-experience;Asian-experience;Western-experience+βControl-variables +Year & Country + ϵ

Variables	Model 1	Model 2	Model 3
Foreign syndicate experience			
Broad experience (I)	0.0625		
	(0.042)		
Asian experience (I)		0.0613	
		(0.032)	
Western experience (I)			0.0601
			(0.038)
Control variables			
Early-stage venture	-0.1356	-0.1350	-0.1359
	(0.000)	(0.000)	(0.000)
Expansion-stage venture	-0.1810	-0.1811	-0.1812
	(0.000)	(0.000)	(0.000)
VC syndication	0.1143	0.1145	0.1141
	(0.000)	(0.000)	(0.000)
VC portfolio size	-0.0189	-0.0166	-0.0158
	(0.027)	(0.033)	(0.037)
Independent VC	-0.0081	-0.0084	-0.0088
	(0.741)	(0.716)	(0.714)
Corporate VC	0.0627	0.0621	0.0601
	(0.037)	(0.039)	(0.021)
Total rounds received	0.2441	0.2446	0.2440
	(0.000)	(0.000)	(0.000)
Stock market development	0.0164	0.0167	0.0162
	(0.000)	(0.000)	(0.000)
No. of observations	689	689	689
Pseudo-R^2	0.182	0.183	0.184

This table presents an analysis of domestic VC firms' investment performance. We investigate whether past foreign syndicate experience influences current local VCs' investment performance in terms of the likelihood of successful exits. The dependent variable in all models is the dummy variable *successful exit*. We select investments with no foreign VCs in the subsequent investments. We match these investments with investments made by domestic VC firms with no foreign VCs syndications using propensity score matching. All the variables are defined in Table 1. All regressions include year and country fixed effects. P-values are reported in parentheses below the marginal effects.

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ONLINE APPENDIX

Appendix Table A1 Data representativeness

		China	India	Japan	Hong Kong	South Korea	Singapore	Taiwan	Other	Total	Time coverage	Observations per year (average)
AVCJ	N	4,419	1,990	2,924	277	948	373	214	603	11,748	20 years	587
VentureXpert	N	581	928	0	202	2,104	266	173	0	4,254	10 years	425
China Venture	N	4,637	0	0	116	0	0	0	0	4,753	23 years	207
Zero2IPO	N	495	0	0	0	0	0	0	0	495	7 years	71

This table shows the comparison between our database (AVCJ) and other databases used in previous studies: the VentureXpert database, China Venture database and Zero2IPO database

Appendix Table 2A Correlation matrix

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1)	Broad experience (I)	1.00													
(2)	Asian experience (I)	0.63	1.00												
(3)	Western experience (I)	0.90	0.46	1.00											
(4)	Broad experience	0.83	0.72	0.83	1.00										
(5)	Asian experience	0.54	0.86	0.43	0.76	1.00									
(6)	Western experience	0.77	0.55	0.86	0.96	0.59	1.00								
(7)	VC syndication	0.23	0.27	0.22	0.13	0.08	0.12	1.00							
(8)	VC portfolio size	0.43	0.33	0.41	0.47	0.33	0.44	-0.03	1.00						
(9)	Independent VC	0.11	0.08	0.12	0.09	0.04	0.09	0.11	0.24	1.00					
(10)	Corporate VC	0.06	0.13	0.04	0.07	0.09	0.06	0.22	-0.04	-0.40	1.00				
(11)	Early-stage venture	0.02	0.01	0.05	0.02	-0.01	0.04	0.13	-0.14	-0.04	0.07	1.00			
(12)	Expansion-stage venture	-0.02	-0.01	-0.05	-0.02	0.01	-0.04	-0.15	0.17	0.05	-0.08	-0.91	1.00		
(13)	Total rounds received	-0.02	0.01	-0.01	-0.02	-0.02	-0.01	0.14	-0.09	0.00	0.05	0.21	-0.18	1.00	
(14)	Stock market development	-0.04	-0.03	-0.05	-0.04	-0.03	-0.04	-0.01	-0.22	-0.10	0.01	0.04	-0.05	-0.02	1.00

This table shows the pairwise correlation matrix of the main independent variables used in the multivariate analyses.

Appendix Table 3A Investments by domestic VC firms, 1996-2009

Year	(1) No. of ventures	(2) No. of ventures backed by VC firms with broad experience		(3) No. of ventures backed by VC firms without broad experience		(4) No. of ventures backed by VC firms with Asian experience		(5) No. of ventures backed by VC firms with Western experience		(6) No. of ventures backed by VC firms with both Asian and Western experience	
	N	N	%	N	%	N	%	N	%	N	%
1996	16	3	18.8	13	81.3	0	0.0	3	18.8	0	0.0
1997	51	0	0.0	51	100.0	0	0.0	0	0.0	0	0.0
1998	63	0	0.0	63	100.0	0	0.0	0	0.0	0	0.0
1999	56	4	7.1	52	92.9	4	7.1	0	0.0	2	0.5
2000	234	50	21.4	184	78.6	10	4.3	40	17.1	9	2.1
2001	159	54	34.0	105	66.0	17	10.7	37	23.3	9	2.1
2002	118	28	23.7	90	76.3	13	11.0	15	12.7	10	2.4
2003	106	41	38.7	65	61.3	26	24.5	15	14.2	20	4.7
2004	186	55	29.6	131	70.4	32	17.2	23	12.4	29	6.8
2005	232	78	33.6	154	66.4	42	18.1	36	15.5	37	8.7
2006	421	150	35.6	271	64.4	64	15.2	86	20.4	56	13.2
2007	630	250	39.7	380	60.3	135	21.4	115	18.3	79	18.6
2008	578	255	44.1	323	55.9	135	23.4	120	20.8	98	23.1
2009	459	183	39.9	276	60.1	101	22.0	82	17.9	75	17.7
Total	3,309	1,151	34.8	2,158	65.2	579	17.5	572	17.3	424	12.8

This table presents the descriptive statistics of the investments (company level, not round level) made by domestic VC firms from 1996 to 2009. Column (1) shows the number of ventures invested in by all domestic VC firms. Columns (2) and (3) show a breakdown of these investments, as follows: (2) describes the ventures invested in by domestic VC firms with foreign syndicate experience (broad experience), and (3) describes the ventures invested in by domestic VC firms without foreign syndicate experience (our control group). Columns (4) to (6) describe the ventures invested in by domestic VC firms with foreign syndicate experience, i.e., a breakdown of column (2). Column (4) describes the ventures invested in by domestic VC firms with Asian experience; (5) describes the ventures invested in by domestic VC firms with Western experience; and (6) describes the ventures invested in by domestic VC firms with both Asian and Western experience. The variables *broad experience*, *Asian experience*, and *Western experience* are defined in Table 1 of the manuscript.

Appendix Table 4A Investment performance and foreign syndicate experience, by exit route

$Ln[p/(1-p)] = \beta_0 + \beta_1$(Broad-experience;Asian-experience;Western-experience $+\beta$ Control-variables + Year & Country + ϵ

	IPO exit			Trade sale exit		
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Foreign syndicate experience						
Broad experience (I)	0.0730	-	-	0.0780	-	-
	(0.093)	-	-	(0.054)	-	-
Asian experience (I)	-	0.0761	-	-	0.0771	-
	-	(0.084)	-	-	(0.072)	-
Western experience (I)	-	-	0.1122	-	-	0.0791
	-	-	(0.042)	-	-	(0.063)
Control variables						
Small early-stage fund	-0.0846	-0.0847	-0.0848	-0.0097	-0.0097	-0.0096
	(0.000)	(0.000)	(0.000)	(0.262)	(0.265)	(0.266)
Legality	0.0718	0.0718	0.0717	0.0043	0.0043	0.0043
	(0.007)	(0.007)	(0.007)	(0.682)	(0.685)	(0.686)
Cultural distance	0.0209	0.0209	0.0209	-0.00827	-0.00834	-0.00833
	(0.343)	(0.344)	(0.343)	(0.365)	(0.362)	(0.362)
VC syndication	0.1141	0.1141	0.1104	0.0278	0.0282	0.0283
	(0.000)	(0.000)	(0.000)	(0.066)	(0.071)	(0.066)
VC portfolio size	-0.0069	-0.0067	-0.0068	-0.0090	-0.0085	-0.0083
	(0.074)	(0.063)	(0.084)	(0.006)	(0.010)	(0.012)
Independent VC	-0.0056	-0.0057	-0.0058	-0.0022	-0.0022	-0.0021
	(0.683)	(0.676)	(0.673)	(0.791)	(0.793)	(0.798)
Corporate VC	0.0840	0.0739	0.0829	0.0036	0.0031	0.0030
	(0.080)	(0.081)	(0.088)	(0.730)	(0.766)	(0.773)
Total rounds received	0.1751	0.1750	0.1741	0.0671	0.0674	0.0676
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Stock market development	0.0162	0.0161	0.0163	0.0092	0.0093	0.0091
	(0.031)	(0.011)	(0.021)	(0.070)	(0.071)	(0.672)
No. of observations	3,099	3,099	3,099	2,766	2,766	2,766
Pseudo-R^2	0.2071	0.2072	0.2101	0.2431	0.2511	0.2132

This table presents an analysis of domestic VC firms' investment performance, distinguishing between IPOs and trade sales. We use logit regressions to investigate whether past foreign syndicate experience influences current domestic VC firms' investment performance in terms of the likelihood of a successful exit. The dependent variable in Models 1–3 is a dummy variable that takes the value 1 if the investee company has been exited via an IPO, while in Models 4–6 it is a dummy equaling 1 if the exit was via a trade sale, by the end of 2012. In Models 1–3 (Models 4–6), we exclude the observations with a trade sale exit (an IPO exit). All the variables are defined in Table 1 of the manuscript. All regressions include year and country fixed effects. P-values are reported in parentheses below the marginal effects.