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Responding to uncertainty: syndication partner choice by foreign venture capital firms in China

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Cross-border venture capital investment has grown dramatically. Drawing upon observations about the liability of foreignness, previous research has shown that foreign venture capitalists (VCs) tend to partner with local VCs in order to offset information asymmetry and the liabilities of foreignness. Much of the literature has suggested that local VCs should help reduce operational uncertainty. This paper examines syndication partner choice in China, which today is likely the most uncertain environment in which foreign VCs operate on a large scale. This provides an ideal environment for understanding partner selection under uncertainty. Our results show that foreign investors are more likely to choose Chinese investors in later rounds and in more mature portfolio firms. While foreign firms with more Chinese experience are more likely to co-invest with Chinese VCs, the older foreign VC firms are less likely to do so. Remarkably, having a Chinese office made foreign VCs less likely to co-invest. In seed-stage investments, when uncertainty is the greatest, foreign firms are least likely to co-invest with Chinese VCs, and this was not affected by the maturation of the market, while at the later stage, when uncertainty is lowest, they are most likely to co-invest.

Keywords: China; foreign investors; syndication; venture capital

1. Introduction

Ultimately, venture capital (VC) investing is about making the correct investment decision about the uncertain future of the target firm. Unsurprisingly, the earlier the stage of investment, the greater is the uncertainty of the outcome of such an investment. VC investors face uncertainty regarding markets, timing, competition, management teams, and the firm's technology. A variety of mechanisms, including investment staging, intensive portfolio firm monitoring, and deal syndication have evolved to manage this reality (on staging, see Gompers 1995; on monitoring, see Kaplan and Stromberg 2003; Lerner 1995; on syndication, see Brander et al. 2002; Dimov and Milanov 2010; Kogut et al. 2007; Lerner 1994). It has long been recognized that venture capitalists (VCs) prefer to invest in proximate firms as this reduces the costs of monitoring (Cumming and Dai 2010; Devigne et al. 2013; Florida and Kenney 1988; Sorenson and Stuart 2001). And yet, over the past two decades, despite the proclivity to invest locally, the attractive opportunities abroad have enticed VC firms to invest in other nations (Guler and Guillen 2010; Mäkelä and Maula 2005; Wright et al. 2005).

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The emergence of VC firms with global investments and offices creates a remarkable experiment in understanding when and how VCs syndicate in uncertain environments. In this paper, we take advantage of the rush of foreign VCs into China to better understand how and when they syndicate with local VC firms. China is a particularly interesting laboratory for studying the relationship between foreign and domestic VC investors, as its legal, financial, and social systems are markedly different from those of nearly any other major economy. China invariably scores low on indicators of transparency, investor protection, rule of law, and so on, all of which increase uncertainty in the minds of investors, and yet such uncertainty has been overcome by the attractiveness of investing in China (Groh et al. 2014). In terms of the adoption of personal computing, the Internet, and mobile telephony, China's growth has been unparalleled. In 25 years China went from having very few personal computers, no Internet access, and no mobile telephones to having the largest market in the world. Moreover, the Chinese government constantly impeded foreign information-technology firms, such as Yahoo!, Google, and Facebook, from overwhelming the domestic market (Breznitz and Murphree 2011).

Given the recognized importance of proximity, there is significant evidence that foreign investors are likely to co-invest with local investors, so one might expect this to be particularly true in the uncertain Chinese environment. The reasons for co-investment include knowledge of domestic legal requirements that local VC firms possess (Mäkelä and Maula 2006) and their experience in the domestic market (Jääskeläinen and Maula 2014; Wright et al. 2005). Not surprisingly, previous research on cross-border co-investment found that foreign firms co-invest with local investors, as this reduces risk and assists in firm monitoring (Mäkelä and Maula 2006, 2008; Meuleman and Wright 2011). Syndicates composed of domestic and foreign firms have been found to perform better than those made up of either purely international or purely local VCs (Chemmanur et al. 2013; Devigne et al. 2013). More recently, Liu and Maula (2015) found that cross-border co-investment differs according to the type of uncertainty. If there is portfolio firm-specific uncertainty, then co-investing with local VCs increases; however, market uncertainty deters co-investment with local firms.

VCs invest in relatively risky non-publicly traded firms whose future performance is highly uncertain, particularly at the earliest stages, when the management, the market, the technology, and the business model have not yet been proved. It might be expected that investment partners are chosen at this stage on the basis of their ability to add value. However, in his review of the literature, Jääskeläinen (2012, 450) found little evidence for this supposition. Rather, VCs have been observed to prefer experienced and reputable partners (Lerner 1994; Lockett and Wright 1999; Meuleman and Wright 2011).

Because VC investment involves a purchase of equity, the economics of it resembles that of a partnership in two respects. First, the investors become partners with the portfolio firm in which they invest. Second, co-investors become partners, as they pay the same valuation for the firm and have a common interest in the venture's success. Co-investors are chosen by the portfolio firm and the round's lead VC investor. This choice can be seen as one of optimization to balance two competing objectives. For the lead VC investor, choosing a similar VC firm will most likely bring in co-investors that share similar values and goals, making working with them easier, though they will likely have redundant knowledge, resources, and networks. In contrast, bringing dissimilar VCs into the co-investment syndicate should increase the diversity of knowledge, resources, and networks, but there are more likely to be disagreements regarding strategy, goals, and possible free-rider problems (Manigart et al. 2006). These disagreements, due to

different values and goals, are likely to be most troublesome, when the young firm experiences difficulties. Generally, organizational theory suggests that in conditions of high uncertainty, mutual trust and understanding can ease stress, VC firms with similar backgrounds and characteristics will be selected (McPherson et al. 2001; Ruef et al. 2003). In contrast, in conditions of greater certainty, which normally comes at more mature firms, co-investor selection can be less homogeneous because the intense coaching and monitoring needed by a fledgling firm is not as necessary. At these later stages, the goal may be raising even larger amounts of capital to fuel the portfolio firm's growth or finding investors with other capabilities, such as, in China, good connections with government officials.

Clearly one motivation in the choice of co-investors is to reduce uncertainty (Dimov and Milanov 2010). Perceived uncertainty is reduced by choosing co-investors whose assessment of opportunity and practices for interacting with the portfolio firm is likely to be similar to that of the lead VC. Previous research shows that lead investors prefer to work with VCs with which they have had previous experience (presumably good ones), that are similar, that is, homophilous (Trapido 2007), or that are high in status (Chung et al. 2000; Dimov and Milanov 2010; Meuleman and Wright 2011). All this suggests that uncertainty reduction is a powerful motivator for choosing an investment partner.

Most previous research has shown that foreign VC firms tend to co-invest with VCs that are local for the recipient firm (Chemmanur et al. 2013; Devigne et al. 2013; Mäkelä and Maula 2006, 2008; Meuleman and Wright 2011). The primary explanation of the preference of foreign firms for co-investing with local partners when entering an overseas market is mitigation of the uncertainties due to information asymmetry and foreignness (Chemmanur et al. 2013; Dai et al. 2012; Devigne et al. 2013; Meuleman and Wright 2011).

Yet a sizable literature also finds that social status and organizational similarity affect the choice of co-investors (Hochberg et al. 2007, forthcoming; Sorenson and Stuart 2001, 2008; Wright and Lockett 2003). The studies of co-investors suggest that when uncertainty is higher, VCs prefer to co-invest with other VCs that share similar experiences, organizational structures, and goals. While diverse co-investors might bring different skills and networks to the syndicate that could assist the portfolio firm, the impulse toward homophily should be greatest in earlier-stage investments, when uncertainty is highest.

Such a setting contains an inherent tension between these two considerations in the selection of a VC firm as a co-investor. On the one hand, VC firms from the country of the portfolio firm have knowledge of the home market and bring to the syndicate a different set of skills and networks than that available to the lead VC. On the other hand, an established foreign VC firm that shares the same perspective and goals as does the lead VC and thereby reduces uncertainty. How these two tendencies play out in the choice of a Chinese VC co-investor over different investment rounds as characteristics of the lead VC firm, portfolio firm, and investment-stage change is the focus of this study. Building on Liu and Maula's (2014) findings, and using similar data, we test the co-investment choices of foreign VC investment in China.

2. The Chinese setting

In terms of VC invested, China has led all other nations except the USA since 2008 (Ernst and Young, various years). While the Chinese government has implemented substantial regulatory reforms over the years, the Chinese economy still remains

remarkably different from that of Western countries (see, e.g., Ahlstrom et al. 2007; Bruton et al. 2009). This high level of VC investment has been maintained despite the fact that China continues to rate quite low on indices of transparency and the rule of law (see, e.g., Groh et al., 2014). The attraction of China for VC investors, of course, is its remarkable success in providing lucrative exits on U.S. stock markets.[1] Given its size and the rapidity of its growth, as well as the significance of foreign VC involvement in China, the Chinese VC industry has attracted significant attention from scholars interested in the globalization of the VC industry (Bruton and Ahlstrom 2003; Fuller 2010).

In China, portfolio firms that receive investment from a foreign VC are more likely to list on foreign markets and be affiliated with prestigious law firms, bankers, and accountants (Humphery-Jenner and Suchard 2013a, 2013b). Earlier work found that networks of personal relationships (*guanxi*) were vital for entrepreneurs seeking investment capital (Batjargal and Liu 2004). In addition, in their study of co-investment decisions among Chinese venture capitalists, Gu and Lu (2014) found that the relationship between a firm's reputation and its likelihood of co-investment was curvilinear. That is, firms with both high and low reputations are less likely than those in the middle to form co-investment syndicates, but this also depends upon institutional development, which they proxied as a dummy variable for 2004. McNulty (2012, 105–106) found that foreign investors were reluctant to co-invest with Chinese counterparts for a number of reasons, including differences in culture, perception of risk, and judgments about capability and experience – all of which increase uncertainty. These differences allow us to explore the role of uncertainty in affecting co-investment partner choice by investors operating in a foreign environment.

3. Hypothesis development

The variables of interest for this study are the characteristics of the foreign lead VC firm and the portfolio firm that impact co-investment choices. Because our dependent variable is whether the foreign firm co-invests with a Chinese partner, we do not examine the characteristics of the Chinese co-investors.

3.1. Foreign VC firm characteristics

Co-investment preference may depend on the lead VC's own characteristics. The characteristics of foreign VC firms that might influence their choice of co-investors consist of their experience operating in China, their overall experience as measured by age, and whether they have an office in China. We separate these into the following characteristics and hypotheses.

3.1.1. Foreign VC firm's Chinese investment experience

Organizational learning theory suggests that prior experience influences later behavior (Sorenson and Stuart 2001). Foreign firms with more experience in investing in China are expected to be familiar with and adapted to the local institutional environment (Meuleman and Wright 2011). Over time, the experience that foreign firms accrue could alter the preference of co-investors in two respects. First, with foreign firms' increased understanding of the Chinese context and actors, prior experience should decrease uncertainty as they identify trusted local partners. For example, Sorenson and Stuart

(2008) found that, when in known settings, actors were more willing to experiment with dissimilar co-investors. The reduced foreignness of the Chinese market should induce foreign firms to co-invest more willingly with local firms. Such an effect might be especially powerful in China, where the importance of networks and connections is well documented (Batjargal and Liu 2004). For this reason, foreign firms with greater Chinese experience should be more willing to accept domestic co-investors because of their greater connections and understanding of the local market. Therefore, we hypothesize.

Hypothesis 1 (H1): Foreign VC firms with greater investment experience in China are more likely to select Chinese VCs as co-investors.

3.1.2. Foreign VC firm status

A frequently used measure of experience and status of a firm is its age (Sorenson and Stuart 2001). It has been shown repeatedly that there are decision-making differences between newer and older VC firms (Butler and Goktan 2007; Cumming and Dai 2010; Sorenson and Stuart 2001). High-status VCs frequently invest with other firms of similar status (Hsu 2004). Because VC investing in China is a relatively new activity, and, initially, there were few Chinese VC firms, foreign VC firms tend to choose other foreign VC firms. The status of these foreign VC firms leads us to expect that they would be more likely to co-invest with similar status VCs in China. Pre-existing relationships should create trust in their previous investment partner's abilities and resources, and hence they would be more likely to co-invest with them (Sorenson and Stuart 2008). Because of the large number of foreign VCs investing in China, older firms have a pool of other similar foreign VCs to select as partners. For this reason, older higher-status VC firms might have less need for local co-investors than younger foreign VCs with less prestige and contacts.

This tendency may be further reinforced during the period of this study as the Chinese VC market was attractive, and many new foreign VC operations were formed to invest in China. These novice foreign VC firms had neither the contacts nor the 'brand' to entice other elite foreign VCs to co-invest with them. This should make these novices more willing to co-invest with a Chinese firm that could provide them with access to local deals (Wright et al. 2005). For these reasons, the lead VC's status, as measured by age, will affect the probability of selecting a Chinese partner. For these reasons, we hypothesize the following.

Hypothesis 2 (H2): The age of a foreign VC firm, as a measure of status, is likely to be negatively correlated with co-investment with Chinese VC firms.

3.1.3. Chinese offices of foreign VC firms

Proximity to portfolio firms has long been known to be of great importance to VC investors (Florida and Kenney 1988; Sorenson and Stuart 2001). The rising tide of successful exits beginning in roughly 2000 prompted many foreign VC firms to open local offices in China (Zhang 2011). The foreign office can be expected to increase knowledge of the local market and thereby decrease uncertainty and simplify monitoring (Meuleman and Wright 2011).[2] In our database, by the end of 2012, 71.3% of foreign firms with four or more investment deals in China had a Chinese office. Having an office

in a market is likely to have two different effects. First, it should increase access to local knowledge (Meuleman and Wright 2011) and help build local personal relationships, thereby increasing the propensity of the foreign VC firm to co-invest with local VC firms. On the other hand, having a local office might reduce the value of the knowledge of possible Chinese co-investors, thereby decreasing the probability of choosing a Chinese partner. There are two possibilities, and they might work at cross-purposes. For this analysis, we phrase the hypothesis affirmatively, but believe that these two effects might cancel each other out or be different according to the portfolio firm's stage, which would affect uncertainty. Therefore, we hypothesize that:

Hypothesis 3 (H3): Having a Chinese office will increase the probability that the foreign VC firm will select a Chinese partner.

3.2. *Portfolio firm characteristics*

The characteristics of the portfolio firm, including a portfolio firm's age, geographic location, and industry can affect co-investor choice (Hochberg et al. forthcoming; Liu and Maula 2014).[3]

3.2.1. *Portfolio firm age*

One of the primary bases for investment uncertainty is a portfolio firm's operating history. An older firm has a longer operating history, and therefore it is easier to judge its viability and growth trajectory, thus reducing uncertainty (Sorenson and Stuart 2001). This should encourage the lead VC to recruit dissimilar co-investors with complementary resources. Therefore, we expect that:

Hypothesis 4 (H4): The portfolio firm's age positively affects the likelihood that a foreign VC firm will choose a Chinese co-investor.

3.2.2. *Portfolio firm location*

VC firms often have geographic preferences (Lindgaard Christensen 2007; Hochberg et al. forthcoming; Sorenson and Stuart 2001). Foreign investments are highly concentrated in Beijing and Shanghai, while domestic investment is dispersed more widely across the country (Zhang 2011). These peripheral regions are less well understood by the foreign firms, as they are likely to have fewer local connections and experience. Further, entrepreneurs in those outlying regions may be more resistant to the sale of significant ownership to syndicates composed entirely of 'outsiders' (Tan et al. 2008). For these reasons, in the case of portfolio firms located outside Beijing and Shanghai, foreign investors are more likely to co-invest with Chinese VC firms.

Hypothesis 5 (H5): Foreign lead VC syndicates are more likely to contain Chinese co-investors if the portfolio firm is located outside the two VC centers, Beijing and Shanghai.

3.3. *Investment characteristics*

In addition to the characteristics of the foreign VC firms and the portfolio firms, characteristics of the specific syndicates include investment stage and investment year.

3.3.1. Investment stage

The earlier the portfolio firm's stage, the greater the uncertainty about whether it will be successful, the more monitoring it will require, and the greater the involvement of the VC investors is likely to be. In uncertain environments like China, this may be exacerbated. It has been found that foreign VCs tend to invest at earlier stages than do Chinese firms (Tan et al. 2008). This is a particularly interesting question, as the basis for the successful VC industry in the USA has been early-stage investing. To explore this further, after running our models with dummy variables for the four stages identified by VentureXpert, we ran the same variables in separate regressions for each stage so as to more deeply explore the differences that might exist. For this study, this was also necessary because the preponderance of portfolio firms in our database did not go through the classical sequence of seed, early, expansion, and later stages. To illustrate, many portfolio firms received not only their first syndicated round of investment, but also their first VC investments at the later stages (see Table 1). For this reason, we expect that:

Hypothesis 6 (H6): The earlier the investment stage, the less likely it is that the co-investor will be Chinese.

3.3.2. Investment year

The Chinese VC market has matured rapidly, in terms of both changed government policies for encouraging VC and the level of experience of Chinese VC firms. In the late 1990s, when foreign VCs began investing in Chinese firms, there were few domestic Chinese VC firms, and they were inexperienced at nurturing young firms. Moreover, it has been reported that they were risk averse (Tan et al. 2008). Since then, Chinese financial and legal policies have greatly evolved (Xu 2002). For this reason, we expect that the investment year will have an impact on co-investing. Therefore, we propose:

Hypothesis 7 (H7): Investment year is positively correlated with the presence of a Chinese co-investor.

Table 1. Co-investment ties by stage and round.

Investment stage/round	1	2	3	4	5	6	7	Percent of stage	Total
Seed stage:	126	12	3						141
Foreign VC – foreign VC tie	91	9						70.9	100
Foreign VC – Chinese VC tie	35	3	3					29.1	41
Early stage:	289	193	47	19	2				550
Foreign VC – foreign VC tie	210	147	33	14				73.5	404
Foreign VC – Chinese VC tie	79	46	14	5	2			26.5	146
Expansion stage:	422	286	185	95	28	16	12		1044
Foreign VC – foreign VC tie	338	215	145	85	23	15	10	79.6	831
Foreign VC – Chinese VC tie	84	71	40	10	5	1	2	20.4	213
Later stage:	146	83	78	46	48				401
Foreign VC – foreign VC tie	85	49	54	36	35			64.6	259
Foreign VC – Chinese VC tie	61	34	24	10	13			35.4	142
Total	983	574	313	160	78	16	12		2136
Foreign VC – foreign VC tie	724	420	232	135	58	15	10	74.6	1594
Foreign VC – Chinese VC tie	259	154	81	25	20	1	2	25.4%	542

4. Data and methodology

4.1. Data

The data for this study were drawn from the Thomson VentureXpert database, which attempts to record all VC firm investments globally and has been used by many researchers (e.g., Liu and Maula 2014; Sorenson and Stuart 2001). Using the VentureXpert database, we created a comprehensive dataset of foreign VC investments in China from 1 January 1992 to 31 December 2012. The dataset was created in several steps. First, we defined 'foreign venture capital firms' based on the firms included in the VentureXpert database, which comprises a large number of VC firms 'headquartered' in China that are not domestic Chinese firms but, rather, are subsidiaries of foreign VC firms. It also includes VC firms established abroad by Chinese citizens or ethnic Chinese who are foreign nationals (e.g., Ceyuan Ventures Management) or were established in China by Westerners (e.g., TDR Capital). In our database, all VC firms headquartered outside China and VC firms headquartered in China that were established by non-Chinese are classified as foreign VC firms. Subsidiaries of the same foreign VC firm but with different names are combined as one firm (e.g., SAIF Partners, Softbank China Venture Capital, and Softbank Corp). This correction is important because these different subsidiaries may co-invest, but these are not arm's-length co-investment decisions.

The following investments were excluded from our database as they are not classic VC investments: (1) portfolio firms that were state-owned enterprises, township and village enterprises, banks, spinoffs, subsidiaries, and joint ventures; (2) mature portfolio firms that received their first investment when they were more than 15 years old; (3) portfolio firms that received their first VC investment only at the latest stage and within one year of an initial public offering (IPO); and (4) portfolio firms in manufacturing about which there was no further information available either in VentureXpert or in an online search. In addition, the VentureXpert database includes misclassified or multiple listings of the same portfolio firm and missing geographic and industrial information. We also excluded firms in VentureXpert that have 'undisclosed' investors or 'unknown' locations. After this data preparation, 1095 portfolio firms remained, which received 3365 foreign investments and 696 Chinese investments (an investment is defined as one portfolio firm receiving an investment from one VC in one investment round).

VentureXpert categorizes all investments as belonging to one of four mutually exclusive stages. The seed stage refers to 'portfolio companies that have not yet fully established commercial operations and may also involve continued research and product development.' The early stage refers to portfolio companies after the seed stage/startup, and the funds are used for product development, initial marketing, manufacturing, and sales activities. The expansion stage is investment into portfolio companies that have products and services that are currently available and require additional capital to expand production to increase revenue. Later-stage investments are those in an established portfolio firm that has products or services already generating revenue but may not be making a profit. This is normally the last round of investments before an exit in the form of an IPO or acquisition by a strategic partner. Normally, at later stages firm valuations are higher, allowing previous investors to capture some of the value that their investments have created. This is possible because, as a portfolio firm progresses through these stages, the level of uncertainty regarding its management team, market, and technology decreases.

If more than one VC firm invests in a particular portfolio firm in a particular round, this is defined as a syndicated co-investment round. The same co-investors usually invest in a target portfolio firm over several rounds. We followed Sorenson and Stuart (2008) but modified their strategy[4] and included all co-investment rounds in which one or more new firms joined the syndicate. These are defined as the set of 'foreign syndicate co-investment rounds.'

The VentureXpert database provides the financing round number of all the investments. Table 1 shows the count of co-investments by investment round and portfolio firms' stage. Sorenson and Stuart (2008) used the count of the financing round to measure the risk and uncertainty of the investment environment. However, Table 1 shows that in China there were an extraordinarily large number of first rounds in the later stages. If we define seed stage as 1, early stage as 2, expansion as 3, and later stage as 4, the Pearson correlation coefficient between these stages and investment rounds is only 0.287, which is remarkably low, suggesting that the investment stage, which is defined clearly, is a better measure of uncertainty reduction than the investment round. Therefore, we did not use the investment round as a variable. Note that because we were interested in co-investments, we omitted all 851 foreign new solo investment rounds, which was 53.3% of all 1596 foreign new rounds (see Table 2).

In choosing a syndicate partner, the lead VC firm is assumed to decide whether to accept a co-investor. Our goal is to estimate the probability that the lead foreign firm will choose either a Chinese or a foreign co-investor. We identified the lead investor using the following criteria: (1) if a foreign firm has only Chinese partners or undisclosed partners in a particular syndicate round, the foreign firm is the lead; (2) if the equity amount of the foreign firm in the syndicate round is the largest, it is the lead VC firm; (3) if more than one foreign firm invested in a syndicate round of a particular portfolio firm with equal equity, we define the firm entering the portfolio firm in an earlier round as the lead; (4) if more than one foreign firm invested in a syndicate round of a particular portfolio firm with equal equity, and the first round it entered the portfolio firms is also the same, we define the VC firm investing the most times in the portfolio firm as the lead.[5]

Second, we identified co-investment rounds in which there was more than one lead VC. To be more specific, if two or more foreign firms made an equal investment in the syndicated round, we defined them as co-leads. For these co-lead rounds, we not only count the relationships between each co-lead and its other non-lead investors but also include the interactional relationships among co-leads. For example, two co-lead foreign firms i and j syndicate invest with a non-lead partner k in a syndicate round for a portfolio firm, we count four relationships: $i \rightarrow j$, $j \rightarrow i$, $i \rightarrow k$, and $j \rightarrow k$. The dataset includes 555 unique portfolio firms, 745 syndicate rounds, and 2136 relationships by

Table 2. The stage and type for all new syndicated rounds including at least one foreign VC and solo new foreign VC rounds.

	Seed	Early	Expansion	Later	Total rounds
Foreign and Chinese new syndication rounds	27	101	132	60	320
Foreign only new syndication rounds	40	128	212	45	425
Total new foreign syndication rounds	67	229	344	105	745
Foreign new solo rounds	88	269	385	109	851
Percent of total new foreign rounds	56.8	54.0	52.8	50.9	53.3
Total new foreign rounds	155	498	729	214	1596

lead foreign firms. Among these samples, lead foreign firms respectively had 542 relationships with Chinese partners and 1594 relationships with foreign co-investors partners (see Table 1).

4.2. Variables

4.2.1. Dependent variable

The dependent variable in our analysis is binary and indicates that a lead foreign VC firm undertakes a co-investment with a domestic Chinese VC firm or a foreign VC firm in a portfolio firm in a given round. A value of 1 is assigned if a lead foreign VC firm has a Chinese co-investor, and a value of 0 is assigned if a lead foreign VC firm has a foreign VC co-investor (Figure 1).

4.2.2. Independent variables

4.2.2.1. VC experience in China. Used to examine whether previous Chinese experience influences the choice of co-investor, this variable is the number of previous investment rounds in China in which a given lead foreign firm has been involved prior to the date of the given syndicate round. The logarithm of this measure is used.

4.2.2.2. VC age. To measure changes in co-investor choice by more mature venture capitalists, we use the lead foreign firm's age (Sorenson and Stuart 2001; Wang and Wang 2011). The age of the lead foreign venture capitalist is calculated by subtracting its founding date (in its own country) from the year of the co-investment. The logarithm is used.

4.2.2.3. Chinese office. We use a dummy variable to test whether having a Chinese office influences the decision to co-invest with a Chinese firm. If the lead foreign firm has a Chinese office on the date of the investment round, the value of this dummy variable is 1; otherwise, it is 0.

4.2.2.4. Portfolio firm age. This may influence the decision about choosing a Chinese co-investor. It is measured by the number of months from the portfolio firm's establishment date to the date of the investment. The logarithm is used.

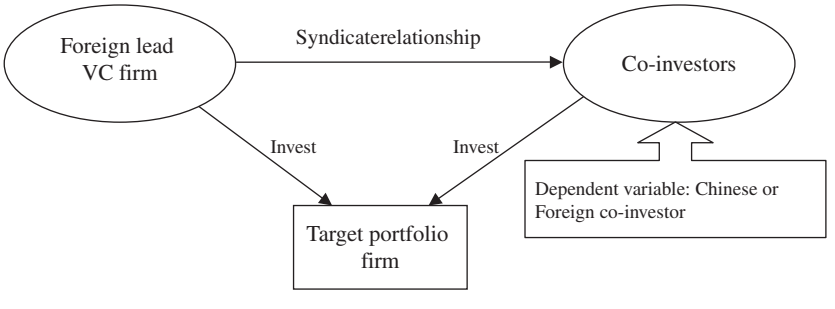

Figure 1. Visual explanation of population.

4.2.2.5. Portfolio firm in VC center. Foreign VC investment in China is concentrated in Beijing and Shanghai. For portfolio firms located in other cities, having a local VC may improve portfolio firm monitoring. For this reason, we created a dummy variable for Beijing and Shanghai, *venture capital center*. The value of this dummy variable is 1 if the portfolio firm is located in Beijing or Shanghai; otherwise, it is 0.

4.2.2.6. Investment stage. The stage variable provides information on the maturity of the firm (Sorenson and Stuart 2001). Therefore, we include four dummy variables: *seed stage, early stage, expansion stage,* and *later stage*. The value of the first three of these dummy variables is 1 if the invested portfolio firm is at that particular stage; otherwise, it is 0. *Later stage* is the reference category for these dummies.

4.2.2.7. Investment year. Normally investment year would be a control variable. However, because of the rapid changes in the Chinese environment and increasing pressure by the Chinese government to include Chinese VCs in deals, chronological changes are of interest as this may have influenced the propensity to choose a Chinese VC partner. This variable is the calendar year of the investment round.

4.2.3. Control variables

4.2.3.1. Syndicate size. The value of this variable is the number of investors in each foreign co-investment round. The logarithm of this measure is used.

4.2.3.2. Prior investor. A dummy variable is used to indicate whether the portfolio firm has received investment from a co-investment syndicate that includes a Chinese firm in a previous investment round. The dummy equals 1 if the portfolio firm has received such an investment; otherwise, it equals 0.

4.2.3.3. Co-investment order. The literature suggests that there may be differences between the initial investment syndication round and later rounds (Cochrane 2005; Dimov and Milanov 2010; Lerner 1994). All things being equal, the first co-investment round should be riskier than later co-investment rounds. The dummy equals 1 if it is the first co-investment round; otherwise, it equals 0.

4.3. Methodology

The dependent variable in our analysis is limited to a binary outcome. The limited dependent variable assumes a value of 1 if a lead foreign VC firm has a Chinese VC co-investor, and a value of 0 if it does not. To test the hypotheses, logistic regressions are employed. The estimated value of this regression is the probability that a VC co-investor is Chinese, and this probability is a function of the independent and control variables discussed in the previous section.

Our first logistic regressions are on the entire population, and we include stages as an independent variable. In the second set of reported regressions, we separate our population by stages to examine whether the determinants of co-investing with Chinese firms differ in the stages. Here, we are posing the question of whether there are

differences in the effect of the independent variables on the dependent variables between the stages.

5. Results

The results of bivariate correlations for our population are reported in Table 3. The correlations are not high, and there is little evidence of multicollinearity. Due to the large number of hypotheses and our decision to run regressions on the entire population and then on each stage separately, we report all the results for each hypothesis separately and then summarize the overall findings.

The results of our models that examine investment stages with dummy variables are reported in Table 4. The results in our most basic regression Model 1 show the probability of choosing a Chinese co-investor using the variables *venture capital experience, venture capital age, portfolio firm age*, and *investment year* and the control variables *prior investor* and *syndicate size*. There was support for H2. One possible reason is that our population contains a number of new VC firms that were formed with the express purpose of investing in China. There was also support for H4 and H7. The coefficient for *venture capital experience* was not significant, meaning that H1 was not supported.

The positive effects of portfolio firms' age indicate that for older portfolio firms, where there is less uncertainty, foreign VCs are more likely to take on Chinese co-investors. Of course, we are not certain of the causality here, but discussions with investors in China suggest that Chinese firms are risk averse and thus prefer entering in later rounds.[6] Obviously, if a Chinese VC has been a co-investor in an earlier round, we would expect it or other Chinese VC to be included in later rounds. During the period of our analysis, Chinese industry was changing due to government policy reforms that favored VC and aimed to increase experience among local VCs. Also, the Chinese government began allowing foreign VCs to raise renminbi funds from local investors. For these reasons, *investment year* was highly significant, suggesting that over time foreign firms were more willing to co-invest with local firms. To conclude, Model 1 demonstrates that younger foreign VC firms were more likely to co-invest with a Chinese partner, and foreign VC firms were more likely to co-invest with Chinese VC firms if the target portfolio firm was older. In the following models, Model 1 is used as the baseline.

Model 2 tested whether having a *Chinese office* affected the propensity to co-invest with a Chinese partner, but it was not significant. This indicates that opening a local office did not change the preference for a Chinese partner; thus H3 is not supported in this model. Model 3 introduced the dummy variable *venture capital center*, which measured whether the location of a portfolio firm in Shanghai or Beijing affected partner preference. The significant negative coefficient suggests that foreign firms are more likely to co-invest with a Chinese partner outside these cities, supporting H5.

If, as the literature suggests, investment uncertainty decreases at later stages, then we would expect that, with all other factors remaining equal, the later the investment stage, the higher is the probability that a co-investor is Chinese. Because of the relatively high and expected correlation between *portfolio firm age* and various *investment stages* (see Table 3), we excluded *portfolio firm age* from Model 4. Therefore, Model 4 is a further test to examine H6 using the dummy variable *investment stage,* excluding the age of portfolio firms. The reference category is *later stage*. It reveals that the probability of choosing a Chinese partner is lower for investments at the early or expansion stage, but

Table 3. Correlation matrix.

	2	3	4	5	6	7	8	9	10	11	12
1. VC experience	0.240**	0.617**	0.098**	−0.028	−0.058**	0.039	0.057**	0.473**	−0.111**	−0.035	−0.226**
2. VC age	1	−0.086**	0.086**	−0.018	−0.062**	−0.029	0.017	0.128**	0.098**	0.043*	−0.144**
3. Chinese office		1	0.092**	−0.093**	−0.008	−0.035	0.076**	0.367**	−0.176**	−0.141**	−0.015
4. PF age			1	−0.105**	−0.492**	−0.326**	0.210**	0.249**	0.131**	0.157**	−0.222**
5. VC center				1	−0.002	0.111**	0.046**	−0.064**	−0.022	0.150**	−0.220**
6. Seed stage					1	−0.157**	−0.260**	−0.073**	−0.115*	−0.109**	0.232**
7. Early stage						1	−0.576**	−0.002	−0.178**	0.01	0.072**
8. Expansion stage							1	−0.018	−0.019	−0.043*	−0.107**
9. Investment year								1	−0.075**	0.067**	−0.193**
10. Syndicate size									1	0.228**	−0.262**
11. Prior investor										1	−0.412**
12. Co-investment order											1

Note: Significance levels of the coefficients: †0.1; *0.05; **0.01; ***0.001.

Table 4. Logistic regression on whether the co-investor is a Chinese venture capital firm.

$N = 2136$	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	−6.040***	−5.982***	−5.525***	−5.053***	−5.297***	−6.225***
	0.666	0.697	0.699	0.697	0.785	0.837
VC experience	−0.026	−0.028	−0.024	0.000	0.004	0.025
	0.040	0.050	0.040	0.040	0.050	0.051
VC age	−0.128*	−0.115†	−0.127*	−0.110*	−0.120*	−0.113†
	0.056	0.060	0.056	0.055	0.060	0.060
Chinese office		0.080			0.036	−0.029
		0.162			0.166	0.165
Portfolio firm age	0.121*	0.140*	0.104†		0.182*	0.215**
	0.059	0.060	0.059		0.083	0.082
VC center			−0.271*		−0.235*	−0.080
			0.124		0.129	0.134
Portfolio firm investment stage:						
Seed stage				−0.153	0.267	0.200
				0.234	0.325	0.324
Early stage				−0.464**	−0.175	−0.157
				0.154	0.200	0.199
Expansion stage				−0.687***	−0.530***	−0.521***
				0.138	0.151	0.151
Investment year	2.035***			1.943***	2.015***	1.972***
	0.254	0.257	0.254	0.247	0.259	0.265
Syndicate size	−0.036	−0.040	−0.049	−0.099	−0.079	0.047
	0.104	0.105	0.104	0.106	0.110	0.111
Prior investor	0.277*	0.280*	0.339*	0.308*	0.323*	
	0.138	0.139	0.141	0.137	0.144	
Co-investment order						0.304*
						0.126
−2 Log likelihood	2218.482	2165.065	22.13.789	2257.790	2137.050	2136.120
Nagelkerke R^2	0.086	0.085	0.089	0.100	0.105	0.105

Note: Significance levels of the coefficients: †0.1; *0.05; **0.01; ***0.001. Standard errors are reported below the coefficients.

with no statistically significant impact on the seed stage, when we expected the effect to be strongest. This may be due to the relatively small *n* at the seed stage.

In the full Model 5, there were no changes, except that the stage significance levels decreased. We also established another full Model 6 using *co-investment order* instead of *prior investor* because of the relatively high and expected correlation between *co-investment order* and *prior investor* (see Table 3). This change in control variables produced just a few changes from Model 5, reducing support for both H2 and H5.[7]

Our results show an increasing willingness of foreigners to co-invest with Chinese VC firms throughout this entire period of time. Yet more experienced and established foreign VC firms, as measured by age, continued to be less likely to co-invest with Chinese firms. Also, if the portfolio firm was located in Beijing or Shanghai, co-investment with Chinese was less likely. Finally, the older the portfolio firm was, the greater the likelihood of Chinese co-investment. These results suggest that decreasing uncertainty encourages foreign firms to include Chinese co-investors. However, to better understand how uncertainty affects co-investment, it is possible to run regressions on the co-investment at each stage, and these results are reported in the next section.

5.1. Regressions by stage

If our hypothesis that co-investment decisions should differ by the level of uncertainty is correct, then the significance of the variable should change by investment stage. In Table 5, the same variables as in the full Model 6 are used for separate regressions. Each regression can be thought of as proceeding from one uncertainty regime to the

Table 5. Logistic regressions on whether the syndicate partner is a Chinese VC firm by portfolio firm investment stage.

Co-investment ties	141	550	1044	401
Unique portfolio firms[a]	65	204	289	89
Constant	−3.344	−4.683***	−7.077**	−14.649***
	3.284	1.321	1.274	2.585
VC experience	0.655*	−0.047	−0.016	0.071
	0.278	0.097	0.078	0.118
VC age	−0.564*	−0.024	−0.044	−0.212
	0.237	0.116	0.096	0.150
Chinese office	−2.693***	0.369	−0.328	1.057*
	0.824	0.312	0.244	0.442
Portfolio firm age	−0.054	0.316*	0.357*	0.171
	0.202	0.158	0.150	0.274
VC center	0.743	−0.318	−0.112	0.498†
	0.594	0.283	0.212	0.303
Investment year	1.550	1.059**	1.997***	4.469***
	1.098	0.409	0.409	0.891
Syndicate size	0.520	0.038	−0.154	0.752**
	0.590	0.273	0.172	0.240
Co-investment order	0.630	0.299	0.191	0.420
	0.845	0.242	0.190	0.304
−2 Log likelihood	128.677	576.687	948.720	409.519
Nagelkerke R^2	0.187	0.062	0.074	0.317

Notes: Significance levels of the coefficients: †0.1; *0.05; **0.01; ***0.001. Standard errors are reported below the coefficients.

[a] The total number of "unique portfolio firms" in the four stages is 647, more than 555 unique portfolio firms in our sample, because some of portfolio firms occur in more than one stage.

next, with each stage being less uncertain. The most noteworthy change is in the seed stage, which provides clear evidence for the proposition that uncertainty affects the choice of partner. The most remarkable change is that at the seed stage, *investment year* is no longer significant. Moreover, as the stages progress, it becomes gradually more significant. This result should be interpreted carefully, as the number of new syndicated rounds at the seed stage was quite low (67), and because at this stage most new investments (88) were solo investments by a foreign VC (see Table 2). Given the propensity to either make a solo investment or co-invest with similar partners, this result confirms previous research (e.g., Sorenson and Stuart 2008) that homophily is most powerful in the most uncertain environments.

Surprisingly, having a Chinese office is negatively related to having a Chinese partner at the seed stage, but is positively related at the later stage. This suggests that the Chinese office may have two functions. The first function is to prospect for early-stage deals and, as such, may operate as a substitute for knowledge that would have been provided by local VCs. When suitable deals are found, then there is a tendency for the more established VC firms to syndicate with other foreign VCs. At the later stages, when the firm is growing and has a more significant presence, the office may function to recruit local investors that are likely to have strong connections with important government officials (Batjargal 2007; Bruton and Ahlstrom 2003; Scheela and Jittrapanun 2012). Effectively, at the early stage, a local office should operate as a substitute for the knowledge that local VCs might supply. In the general models, *venture capital experience* was not significant. However, at the seed stage it was strongly positively related to a willingness to select a Chinese co-investor, suggesting that increased experience in China, which would decrease general uncertainty, may offset the homophily argument. *Venture capital age,* which was negative and significant throughout the general regression, remained negative but was no longer significant outside the seed stage. Apparently, the older foreign VCs remained reluctant to accept Chinese co-investors. At the later stage, syndicate size was significant in the decision to include Chinese co-investors, perhaps because there is relatively low uncertainty, and the portfolio firm is often raising growth capital or may need connections with policy makers or other actors prior to an IPO.

5.2. Sensitivity analysis

Given the findings in previous research on cross-border co-investment decisions (Chemmanur et al. 2013; Devigne et al. 2013; Du and Vertinsky 2008; Hoskisson et al. 2000; Meuleman and Wright 2011), we tested for whether nationality had an impact on investment behavior. It was not significant in any of the models and was dropped from our analysis. We also tested whether the organizational type of the foreign VC firm (including limited private partnerships, corporate venture capitalists, and financial venture capital firms) affected the willingness to co-invest with a Chinese firm; we found no significance, so we omitted this variable as well.

Previous research has found that industry characteristics may influence co-investor choice (Hochberg et al. forthcoming; Meuleman and Wright 2011; Sorenson and Stuart 2001, 2008). For this reason, we ran the models with dummy variables for both the information and communication technology and Internet industries, both separately and combined, but found no significance. Dropping these variables from the models led to no substantive changes.

6. Discussion

Existing theories of co-investor choice have highlighted the power of homophily (Sorenson and Stuart 2008), while studies of VC investing in foreign countries have highlighted the importance of local linkages. Learning theories have suggested that prior experience should reduce institutional barriers to co-investment with domestic VCs (Meuleman and Wright 2011). In aggregated models (Table 4), where stages were represented only by dummy variables, there was no evidence that having a Chinese office affected the choice of having a Chinese co-investor. And yet, when we conducted separate regressions by stage, the results were remarkable and of theoretical interest. At the seed stage, experience in China had a positive effect, while having a Chinese office had a strong negative effect. This can be interpreted as suggesting that, at the most uncertain stage, the seed stage, having a Chinese office substituted for the local monitoring capability of a Chinese VC firm. The role of the Chinese office was reversed at the later stage, as it now had a significant positive impact on co-investment with a Chinese firm. This result suggests that when uncertainty is greatest, when the monitoring and advice function should be of greatest importance, foreign VCs with offices in China opt for homophilous co-investors. When the firm's trajectory is more certain, the Chinese office assists in raising capital from local investors. We cannot ascertain the reasons for including Chinese investors, but it could be because the now substantial firm could benefit from the connections that local Chinese firms have with local government.

More generally, outside the VC centers where the foreign offices are located, a local co-investor is preferred, which supports the findings of Mäkelä and Maula (2008). In the general models, we found this to be the case, as foreign VC firms were more likely to co-invest with a Chinese VC firm when the portfolio firm was located outside Shanghai or Beijing. Because foreign offices and investment are concentrated in Beijing and Shanghai, co-investment outside their home regions was more likely to be with local VCs. This result in a Chinese setting agrees with Sorenson and Stuart's (2001) findings in a study of VC investing in the USA. This result is expected, and the reason for it may be more than simply monitoring; rather, that local VC firms are better able to interact with the portfolio firm as well as local business networks and the government.

The *investment year* variable, which is usually a control variable in studies of this type, behaved as expected in the general models, given the changes in the Chinese economy during this period. However, when we ran the models by stage, this variable had no significance at the seed stage. In other words, there was no discernable time effect on the likelihood of co-investment at the seed stage. For every other stage, the passage of time increased the likelihood of having Chinese co-investors. This result suggests that, despite the striking changes in the Chinese environment over the years of this study, at the most uncertain seed stage, foreigners co-invest with their own kind, offering evidence for the link between uncertainty and homophily.

7. Conclusion

Because our data are only for China, our results are exploratory and have limited generalizability, but they reinforce the conclusion of Liu and Maula (2014) that market uncertainty reduces the propensity of foreign VCs to co-invest with local VCs. Unfortunately, our data do not allow us to conclusively determine why the older the foreign VC, the greater was their tendency was to not co-invest with Chinese VCs, and why this was most pronounced in the case of seed-stage firms. However, more

positively, our data indicate that, as foreign VCs become more experienced in China, they exhibit a tendency to co-invest with Chinese firms.

One general limitation is that the VentureXpert database has data-quality problems; some can be corrected with a substantial investment of time, while others, such as missing data, cannot be corrected. Another limitation of the data is the significant number of 'undisclosed' investors. It is possible that these are Chinese nationals, ethnic Chinese who are foreign nationals, or Taiwanese who, for tax or possibly political purposes, want to conceal their identity. This might mean that foreign-domestic co-investment was greater than is captured in our data.

The most significant limitation of the database is that investments attributed to the Chinese subsidiary of a global VC firm are considered domestic. This is a judgment issue, but in international business studies, few scholars would consider a General Electric subsidiary in China to be equivalent to Haier, a domestic Chinese firm. Should the same evaluation hold for VC subsidiaries in foreign countries? This problem is exacerbated, because often foreign firms are initially reported as being foreign but, after opening a branch office, change their identification to 'domestic.' Unfortunately, much current research on cross-border VC investing is not explicit concerning how this is addressed. If this is not corrected for, then the reported research suffers from a problem because it treats a foreign subsidiary as a domestic firm.

One extension of this paper, in particular for research on VC globalization, is to conduct interviews with VCs in order to obtain more nuanced explanations for the patterns seen in the data. Interviews would permit better understanding of the motivations and conditions affecting partner choice. They could also provide greater insight into the significance of the definition of 'foreign' and 'domestic' venture VC firms. Interviews might also provide greater insight into the nature of the 'undisclosed' investors, their nationality, and function in the Chinese VC environment.

From the perspective of Chinese policy-makers and VCs, the propensity of older foreign VCs not to co-invest with Chinese VCs generally and particularly at the riskiest seed stage may limit the potential for learning the most difficult skills of the VC craft from experienced foreigners. These skills include assessing a new opportunity, advising, nurturing, and monitoring of the firm during the most perilous period. It is possible that our time-related measurement may not have captured the most recent changes; since 2008 the Chinese government has been encouraging foreign VC firms to indigenize their operations by operating renminbi-denominated funds that include capital raised in China (see, e.g., Roland Berger Strategy Consultants 2012). Given the tension that now exists between U.S. high-technology firms and the Chinese government, it could be that Western VCs will experience even greater pressure to partner with local VCs.

While much of the research suggests that partnering with local VCs is the dominant strategy in overseas markets, we have evidence that, at least in China, this is not the case. Moreover, at the highly uncertain seed stage, even the increased maturity of Chinese VCs over time did not increase the likelihood that older foreign VCs would co-invest with Chinese VCs. Co-investment was most prevalent at the latest stage, after the portfolio firm already has a significant track record. Despite the fact that older foreign VCs now have Chinese offices staffed by locals and thus presumably are more integrated into the local environment, they continue to choose to co-invest with other foreign firms, confirming the attraction of homophily in conditions of greater uncertainty.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes

1. Generally speaking, foreign VCs investing in China aim at U.S. exits because it eliminates the need to get Chinese government permission to convert the capital gains into U.S. dollars.
2. This an important point where we diverge with previous research on VC globalization, as Thomson and most other sources of data classify foreign VC firms with an office in China as domestic. In contrast, we reclassify them as foreign.
3. Portfolio firm industry was initially included in all our models, but in the results reported here it is omitted because it was not significant and the omission did not affect any of the other variables.
4. Sorenson and Stuart (2008) defined syndicate round as financing rounds in which more than two new-to-the-company VC firms invested in the target company.
5. In 15 cases, foreign VC firms joined a syndicate that Chinese VC firms had already established in an earlier round. As these foreign VC firms were unlikely to have been lead investors, they were eliminated from consideration.
6. As suggested by Martin Haemmig, a Swiss VC industry consultant.
7. The coefficient on the control variable *co-investment order* is positive at the 0.05 level in Model 6, suggesting that a Chinese partner in a first-time syndication is more likely than in syndications in later rounds. This result is somewhat surprising as we would have expected that the likelihood of a Chinese co-investor would be lower in a first-time syndication, not higher. In the regressions by stage, this control variable loses significance (see Table 5).

References

Ahlstrom, D., G. Bruton, and K. Yeh. 2007. "Venture Capital in China: Past, Present, and Future." *Asia Pacific Journal of Management* 24 (3): 247–268. doi:10.1007/s10490-006-9032-1.

Batjargal, B. 2007. "Network Triads: Transitivity, Referral and Venture Capital Decisions in China and Russia." *Journal of International Business Studies* 38 (6): 998–1012. doi:10.1057/palgrave.jibs.8400302.

Batjargal, B., and M. Liu. 2004. "Entrepreneurs' Access to Private Equity in China: The Role of Social Capital." *Organization Science* 15 (2): 159–172. doi:10.1287/orsc.1030.0044.

Brander, J., R. Amit, and W. Antweiler. 2002. "Venture-Capital Syndication: Improved Venture Selection vs. the Value-Added Hypothesis." *Journal of Economics and Management Strategy* 11 (3): 423–452. doi:10.1111/j.1430-9134.2002.00423.x.

Breznitz, D., and M. Murphree. 2011. *Run of the Red Queen: Government, Innovation, Globalization, and Economic Growth in China*. New Haven, CT: Yale University Press.

Bruton, G. D., and D. Ahlstrom. 2003. "An Institutional View of China's Venture Capital Industry." *Journal of Business Venturing* 18 (2): 233–259. doi:10.1016/S0883-9026(02)00079-4.

Bruton, G. D., D. Ahlstrom, and T. Puky. 2009. "Institutional Differences and the Development of Entrepreneurial Ventures: A Comparison of the Venture Capital Industries in Latin America and Asia." *Journal of International Business Studies* 40 (5): 762–778. doi:10.1057/jibs.2009.3.

Butler, A., and M. Goktan. 2007. "Does Distance Still Matter? Evidence from the Venture Capital Market." Working Paper, University of Texas.

Chemmanur, J., T. Hull, and K. Krishnan. 2013. "Expertise or Proximity? International Venture Capital Investments and the Development of Venture Capital Markets." Paper presented at the AFA 2012 Meetings, Chicago, IL. http://ssrn.com/abstract=1670319

Chung, S., H. Singh, and K. Lee. 2000. "Complementarity, Status Similarity and Social Capital as Drivers of Alliance Formation." *Strategic Management Journal* 21 (1): 1–22. doi:10.1002/(SICI)1097-0266(200001)21:1<1:AID-SMJ63>3.0.CO;2-P.

Cochrane, J. H. 2005. "The Risk and Return of Venture Capital." *Journal of Financial Economics* 75 (1): 3–52. doi:10.1016/j.jfineco.2004.03.006.

Cumming, D., and N. Dai. 2010. "Local Bias in Venture Capital Investments." *Journal of Empirical Finance* 17 (3): 362–380. doi:10.1016/j.jempfin.2009.11.001.

Dai, N., H. Jo, and S. Kassicieh. 2012. "Cross-Border Venture Capital Investments in Asia: Selection and Exit Performance." *Journal of Business Venturing* 27 (6): 666–684. doi:10.1016/j.jbusvent.2011.04.004.

Devigne, D., T. Vanacker, S. Manigart, and I. Paeleman. 2013. "The Role of Domestic and Cross-border Venture Capital Investors in the Growth of Portfolio Companies." *Small Business Economics* 40 (3): 553–573. doi:10.1007/s11187-011-9383-y.

Dimov, D., and H. Milanov. 2010. "The Interplay of Need and Opportunity in Venture Capital Investment Syndication." *Journal of Business Venturing* 25 (4): 331–348. doi:10.1016/j.jbusvent.2009.01.002.

Du, Q., and I. Vertinsky. 2008. "Risk Mitigation Strategies of Foreign Venture Capitalists in China." University of British Columbia Working Paper. Available at SSRN 1154809.

Ernst & Young. Various Years. Global Venture Capital Insights and Trends Report.

Florida, R., and M. Kenney. 1988. "Venture capital, high technology and regional development$_*$." *Regional Studies* 22 (1): 33–48. doi:10.1080/00343408812331344750.

Fuller, D. B. 2010. "How Law, Politics and Transnational Networks Affect Technology Entrepreneurship: Explaining Divergent Venture Capital Investing Strategies in China." *Asia Pacific Journal of Management* 27 (3): 445–459. doi:10.1007/s10490-009-9149-0.

Gompers, P. A. 1995. "Optimal Investment, Monitoring, and the Staging of Venture Capital." *Journal of Finance* 50 (5): 1461–1489. doi:10.1111/j.1540-6261.1995.tb05185.x.

Groh, A., H. Liechtenstein, and K. Lieser. 2014. *The Venture Capital and Private Equity Country Attractiveness Index*. Accessed 6 January 2015. http://blog.iese.edu/vcpeindex/files/2013/08/VCPE-Index-2013-Annual-HD.pdf

Gu, Q., and X. Lu. 2014. "Unraveling the Mechanisms of Reputation and Alliance Formation: A Study of Venture Capital Syndication in China." *Strategic Management Journal* 35 (5): 739–750. doi:10.1002/smj.2117.

Guler, I., and M. F. Guillén. 2010. "Institutions and the Internationalization of us Venture Capital Firms." *Journal of International Business Studies* 41 (2): 185–205. doi:10.1057/jibs.2009.35.

Hochberg, Y., L., Lindsey, and M. Westerfield. Forthcoming. "Resource Accumulation Through Economic Ties: Evidence from Venture Capital." *Journal of Financial Economics*.

Hochberg, Y., A. Ljungqvist, and Y. Lu. 2007. "Whom You Know Matters: Venture Capital Networks and Investment Performance." *Journal of Finance* 62 (1): 251–301. doi:10.1111/j.1540-6261.2007.01207.x.

Hoskisson, R., L. Eden, C. Lau, and M. Wright. 2000. "Strategy in Emerging Economies." *Academy of Management Journal* 43 (3): 249–267. doi:10.2307/1556394.

Hsu, D. H. 2004. "What Do Entrepreneurs Pay for Venture Capital Affiliation?" *Journal of Finance* 59 (4): 1805–1844. doi:10.1111/j.1540-6261.2004.00680.x.

Humphery-Jenner, M., and J. A. Suchard. 2013a. "Foreign VCS and Venture Success: Evidence from China." *Journal of Corporate Finance* 21: 16–35. doi:10.1016/j.jcorpfin.2013.01.003.

Humphery-Jenner, M., and J. A. Suchard. 2013b. "Foreign Venture Capitalists and the Internationalization of Entrepreneurial Companies: Evidence from China." *Journal of International Business Studies* 44 (6): 607–621. doi:10.1057/jibs.2013.22.

Jääskeläinen, M. 2012. "Venture Capital Syndication: Synthesis and Future Directions." *International Journal of Management Reviews* 14 (4): 444–463.

Jääskeläinen, M., and M. Maula. 2014. "Do Networks of Financial Intermediaries Help Reduce Local Bias? Evidence from Cross-Border Venture Capital Exits." *Journal of Business Venturing* 29 (5): 704–721.

Kaplan, S. N., and P. Stromberg. 2003. "Financial Contracting Theory Meets the Real World: An Empirical Analysis of Venture Capital Contracts." *Review of Economic Studies* 70 (2): 281–315. doi:10.1111/1467-937X.00245.

Kogut, B., P. Urso, and G. Walker. 2007. "Emergent Properties of a New Financial Market: American Venture Capital Syndication, 1960–2005." *Management Science* 53 (7): 1181–1198. doi:10.1287/mnsc.1060.0620.

Lerner, J. 1994. "The Syndication of Venture Capital Investments." *Financial Management* 23 (3): 16–27. doi:10.2307/3665618.

Lerner, J. 1995. "Venture Capitalists and the Oversight of Private Firms." *Journal of Finance* 50 (1): 301–318. doi:10.1111/j.1540-6261.1995.tb05175.x.

Lindgaard Christensen, J. L. 2007. "The Development of Geographical Specialization of Venture Capital." *European Planning Studies* 15 (6): 817–833. doi:10.1080/09654310701232137.

Liu, Y., and M. Maula. 2015. "To Partner or not with Local Firms in Emerging Markets? The Effects of Different Types of Uncertainty and Experiential Learning on Partnering." *Academy of Management Journal*.

Lockett, A., & Wright, M. 1999. "The syndication of private equity: evidence from the UK." *Venture Capital* 1(4): 303–324.

Mäkelä, M., and M. Maula. 2005. "Cross-Border Venture Capital and New Venture Internationalization: An Isomorphism Perspective." *Venture Capital: An International Journal of Entrepreneurial Finance* 7: 227–257.

Mäkelä, M., and M. Maula. 2006. "Interorganizational Commitment in Syndicated Cross-Border Venture Capital Investments." *Entrepreneurship Theory and Practice* 30: 273–298.

Mäkelä, M., and M. Maula. 2008. "Attracting Cross-Border Venture Capital: The Role of a Local Investor." *Entrepreneurship and Regional Development* 20: 237–257.

Manigart, S., A. Lockett, M. Meuleman, M. Wright, H. Landström, D. Bruining, P. Desbrières, and U. Hommel. 2006. "Venture Capitalists' Decision to Syndicate." *Entrepreneurship Theory and Practice* 30 (2): 131–153. doi:10.1111/j.1540-6520.2006.00115.x.

McNulty, L. 2012. "Finding Profit in and out of China." In *Private Equity in Emerging Markets: The New Frontiers of International Finance*, edited by D. Klonowski, 99–108. London: Palgrave Macmillan.

McPherson, M., L. Smith-Lovin, and J. M. Cook. 2001. "Birds of a Feather: Homophily in Social Networks." *Annual Review of Sociology* 27 (1): 415–444. doi:10.1146/annurev.soc.27.1.415.

Meuleman, M., and M. Wright. 2011. "Cross-Border Private Equity Syndication: Institutional Context and Learning." *Journal of Business Venturing* 26 (1): 35–48. doi:10.1016/j.jbusvent.2009.06.003.

Petkova, A., A. Wadhwa, X. Yao, and S. Jain. 2013. "Reputation and Decision Making Under Ambiguity: A Study of U.S. Venture Capital Firms' Investments in the Emerging Clean Energy Sector." *Academy of Management Journal* 57 (2): 422–448.

Roland Berger Strategy Consultants. 2012. "What Does the Future Hold for Private Equity in China?". Accessed 6 January. http://www.rolandberger.com/media/pdf/Roland_Berger_tac_Private_Equity_in_China_20130721.pdf

Ruef, M., H. E. Aldrich, and N. M. Carter. 2003. "The Structure of Founding Teams: Homophily, Strong Ties, and Isolation Among U.S. Entrepreneurs." *American Sociological Review* 68 (2): 195–222. doi:10.2307/1519766.

Scheela, W., and T. Jittrapanun. 2012. "Do Institutions Matter for Business Angel Investing in Emerging Asian Markets?" *Venture Capital* 14 (4): 289–308. doi:10.1080/13691066.2012.672020.

Sorenson, O., and T. Stuart. 2001. "Syndication Networks and the Spatial Distribution of Venture Capital Investments." *American Journal of Sociology* 106 (6): 1546–1588. doi:10.1086/321301.

Sorenson, O., and T. Stuart. 2008. "Bringing the Context Back In: Settings and the Search for Syndicate Partners in Venture Capital Investment Networks." *Administrative Science Quarterly* 53 (2): 266–294. doi:10.2189/asqu.53.2.266.

Tan, J., W. Zhang, and J. Xia. 2008. "Managing Risk in a Transitional Environment: An Exploratory Study of Control and Incentive Mechanisms of Venture Capital Firms in China." *Journal of Small Business Management* 46 (2): 263–285. doi:10.1111/j.1540-627X.2008.00243.x.

Trapido, D. 2007. "Competitive Embeddedness and the Emergence of Interfirm Cooperation." *Social Forces* 86 (1): 165–191. doi:10.1353/sof.2007.0110.

Wang, L., and S. Wang. 2011. "Cross-Border Venture Capital Performance: Evidence from China." *Pacific-Basin Finance Journal* 19 (1): 71–97. doi:10.1016/j.pacfin.2010.09.002.

Wright, M., and A. Lockett. 2003. "The Structure and Management of Alliances: Syndication in the Venture Capital Industry." *Journal of Management Studies* 40 (8): 2073–2102. doi:10.1046/j.1467-6486.2003.00412.x.

Wright, M., S. Pruthi, and A. Lockett. 2005. "International Venture Capital Research: From Cross-Country Comparisons to Crossing Borders." *International Journal of Management Reviews* 7 (3): 135–165. doi:10.1111/j.1468-2370.2005.00113.x.

Xu, E. 2002. "Venture Capital Finance in China." *Journal of Entrepreneurial Finance* 7: 11–24.

Zhang, J. 2011. "The Spatial Dynamics of Globalizing Venture Capital in China." *Environment and Planning A* 43 (7): 1562–1580. doi:10.1068/a43562.