JOURNAL OF SOCIAL COMPUTING
ISSN 2097-5015 03/06 pp29–42
Volume 6, Number 1, March 2025
DOI: 10.23919/JSC.2024.0032

Cross-Community Collaboration Strategies of Foreign Venture Capital: Industrial Expansion Capacity

Yu Zhang†, Yue Zhang*†, and Tao Wang

Abstract: In the global venture capital (VC) landscape, cross-community collaboration is vital for foreign VC firms, especially in markets like China, where the business environment and the guanxi culture present unique challenges. Using co-investment data from 2000 to 2014, this study identifies seven communities through a semi-supervised detection method, categorizing them by the predominance of domestic or foreign VCs. Cross-community collaboration refers to partnerships between VC firms from different communities, involving at least one domestic and one foreign VC. Logistic regression analysis reveals that industry distance does not significantly impact cross-community collaboration. However, industry hotness and local knowledge positively moderate this relationship. In the Chinese context, signaling theory suggests that cross-community collaborations between foreign and domestic VCs act as a signal of credibility. Guanxi, characterized by trust and reciprocity, encourages foreign VCs to foster long-term relationships with domestic counterparts, helping them bridge industrial and cultural gaps. Additionally, industry hotness and local experience reduce investment risk and uncertainty, leading foreign VCs to engage more frequently in cross-community collaborations that link domestic and foreign ecosystems. This study integrates signaling theory with guanxi in the cross-community VC context, emphasizing the strategic role of syndication as a signal in emerging markets like China.

Key words: cross-community collaboration; community detection; industry distance; industry hotness; local experience

1 Introduction

In recent years, cross-community collaboration has become a crucial strategy for foreign venture capital (VC) firms to expand their industrial footprint in emerging markets such as China. Foreign VCs often lack the deep-rooted social connections that facilitate access to local resources, information, and networks, adding complexity to their entry into China's venture capital landscape[1]. By cooperating with local VCs, however, foreign VCs can bridge critical gaps in market information, policy trends, and cultural understanding, enabling them to more effectively navigate regulatory complexities and cultural nuances[2]. Additionally, the local networks and social capital that domestic VCs possess provide foreign VCs with essential "soft resources" for entering the market, including trust, relationship networks, and access to

• Yu Zhang is with the Department of Sociology, Tsinghua University, Beijing 100084, China. E-mail: yuzhang22@mails.tsinghua.edu.cn.
• Yue Zhang is with the Institute for Cultural Heritage and History of Science & Technology, University of Science and Technology Beijing, Beijing 100084, China. E-mail: mnleod@live.com.
• Tao Wang is with the Graduate School of Economics, Kyoto University, Kyoto 606-8501, Japan. E-mail: eac@econ.kyoto-u.ac.jp.
* To whom correspondence should be addressed.
† Yu Zhang and Yue Zhang contribute equally to this paper.
Manuscript received: 2024-09-12; revised: 2024-11-12; accepted: 2024-11-27

© The author(s) 2025. The articles published in this open access journal are distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/).

local resources—factors that are especially important in the Chinese market[3–5]. However, compared to cooperation within a single community, cross-community collaboration offers foreign VCs greater strategic advantages. It not only helps them quickly establish a broad network of relationships but also effectively diversifies risk, overcoming the resource and information limitations of a single community to achieve multi-layered market insights[6].

The existing literature extensively explores the cooperative relationships between foreign and local venture capital (VC) firms. Syndication, as a collaborative investment strategy, not only provides VCs with opportunities to co-invest in portfolio companies but also establishes a relational network that goes beyond simple financial transactions. These repeated syndications build trust, shared norms, and mutual obligations, promoting social embeddedness within the VC community[7, 8]. This social embeddedness plays an important role in reducing transaction costs, improving information flow, and fostering reciprocal relationships within the community[9–11]. As foreign VCs embed themselves into these syndication networks, they gradually become part of a community that transcends national or cultural boundaries, effectively mitigating the "liability of foreignness" and allowing them to better adapt to the host country's market environment[2, 12]. However, existing research often overlooks the dynamics brought about by deeper social embeddedness. This study aims to fill this gap by focusing on how foreign VCs operate within Chinese communities and develop strategies for cross-community collaboration.

In foreign VC-dominated communities in China, multi-party syndications are common, where foreign VCs often collaborate with other foreign VCs and sometimes with local VCs[13]. Previous experiences of success and failure in other markets encourage foreign VCs to favor collaborating with those foreign partners who entered the Chinese market earlier, thus helping to reduce the liability of foreignness[2, 14, 15]. Familiarity plays a crucial role in partner selection, leading foreign VCs to prefer familiar foreign partners, while local VCs are more inclined to collaborate with other local VCs, forming a tendency for foreign-foreign and local-local dyadic collaborations[16, 17]. Therefore, these cross-community collaborations differ from simple dyadic partnerships, involving complex dynamics and power relations based on social embeddedness—complexities that have not been fully explored in the existing literature.

The contribution of this study lies not only in exploring the cooperation between foreign and domestic VCs in the Chinese market but also in highlighting the unique value and complex dynamics of cross-community collaboration. Using a semi-supervised community detection method, this study identifies seven major communities within China's VC market, highlighting their differences in regional distribution and capital type dominance. Employing a logistic regression model, the study empirically analyzes the effect of industry distance on cross-community collaboration by foreign VCs, finding that industry hotness and local experience positively moderate the relationship between industry distance and cross-community collaboration. In China's unique context, signaling theory suggests that cross-community collaboration provides foreign VCs with multiple channels for market access and resource sharing, enhancing their market credibility through signaling effects. Additionally, China's *guanxi* culture further encourages foreign VCs to build trust through cross-community collaboration, bridging strategic and cultural gaps. These connections enable foreign VCs to leverage resources across multiple communities, reducing investment risks and promoting successful cross-community collaboration.

By revealing the strategic importance of cross-community collaboration in emerging markets, this study not only fills a gap in the existing literature but also provides theoretical and practical support for foreign VCs seeking to expand in emerging markets. Through an in-depth understanding of the unique roles of cross-community collaboration in resource integration, risk diversification, and market adaptability, this study offers new insights and empirical evidence for VCs' cooperation in a globalized context.

2 Theory and Hypotheses

2.1 Industry distance and syndication

Industry distance can also be seen as a proxy for cognitive or technological differences between firms. According to Nooteboom[18], cognitive distance affects knowledge transfer: moderate distance can enhance

learning potential, but excessive distance leads to misalignment. Boschma[19] similarly explained that proximity fosters innovation by improving coordination and communication, while excessive distance increases misunderstandings and reduces trust.

According to the perspectives of institutional theory[20] and transaction cost economics[21], the impact of industry distance on co-investment is influenced by the institutional environment and collaboration costs. For foreign venture capital firms, cross-industry knowledge asymmetries, goal misalignment, and cultural differences can result in greater cognitive and strategic distance, increasing coordination costs and complicating transactions. Different industries are often subject to distinct regulations, cultures, and management practices, and these institutional differences can exacerbate coordination difficulties and strategic misalignments. When companies engage in cross-industry collaborations, they may face varying legal regulations and corporate cultures, which increase the complexity and uncertainty of collaboration, thereby raising transaction costs. These transaction costs include coordinating different operational expectations and addressing potential conflicts, all of which can reduce the likelihood of successful cooperation[22, 23].

Finally, social capital theory complements the understanding of the impact of industry distance. Social capital refers to certain characteristics of social organizations, such as trust, norms, and networks, which can enhance social efficiency by facilitating cooperative action[24]. When companies from different industries collaborate, the lack of prior interaction and unfamiliarity with each other's operational norms can weaken trust. This trust deficit is particularly evident when industry distance is significant, as firms may have divergent goals, cultures, or strategic priorities. These divergences increase perceived risk, making firms more hesitant to engage in cross-industry joint ventures or alliances[7, 25]. In the context of foreign and domestic venture capital communities, industry distance exacerbates the challenge of building trust, as firms from different industries and countries have fewer shared experiences and less familiarity with each other[26]. Therefore, due to these limitations, the likelihood of companies engaging in joint investments decreases when industry distance is large.

As a result, firms are less likely to syndicate when industry distance is high due to these cost and social capital limitations.

Hypothesis 1: Industry distance decreases the syndication likelihood between foreign and domestic communities.

2.2 Industry hotness and syndication

Industry hotness plays a critical role in promoting collaboration between domestic and foreign venture capital (VC) firms. Industry hotness refers to the proportion of VC-backed companies in a particular sector that successfully go public through an initial public offering (IPO). As Loughran and Ritter[27] highlighted, stocks in hot industries are often overvalued on the first day of trading, making these industries more attractive and less risky for investment. The increased liquidity and stable exit opportunities provided by hot industries enhance the incentives for domestic and foreign VCs to collaborate.

Collaboration with domestic VCs offers foreign VCs support in navigating legal and cultural norms, thereby reducing the uncertainties associated with cultural and institutional differences[28, 29]. In the in-depth interview, when asked why foreign investors tend to have more partners, Mr. D. answered:

"Foreign investors like to cooperate (with domestic venture capital (VC) firms), for several possible reasons. First, they are foreign companies, so they tend to hug other (domestic) VC firms, as they are unfamiliar with local conditions. Second, in the early stage (of the development of this industry), foreign investors preferred large projects,... now, they tend to invest in smaller projects.... (Finally), foreign investors bond together to gain greater efficiency (higher protection against uncertainty).... Through mutual trust and governance mechanisms, we co-invest on a project." (Mr. D: C09)

"Large projects" refers to high-capital ventures or collaborations involving multiple stakeholders, often in industries such as technology, energy, and infrastructure. Larger projects tend to occur in rapidly growing or highly competitive industries, which could influence syndication strategies. The reviewer pointed out that foreign investors, when faced with unfamiliar and high-risk projects, collaborate with others to adapt to the local environment, optimize investment

strategies, and mitigate uncertainties.

When an industry shows strong IPO market performance, the benefits of such collaboration become even more apparent. Industry hotness not only boosts confidence in investment returns but also encourages foreign VCs to actively seek partnerships with domestic VCs in hot sectors to leverage local knowledge and social capital, mitigating the challenges posed by cultural and institutional barriers[13]. Although cultural and organizational differences may initially reduce the attractiveness of foreign VCs entering new markets[30], industry hotness amplifies the potential benefits of collaboration. In a hot industry, even if there is significant industry distance, foreign venture capital (VC) firms may be more inclined to collaborate across communities due to the potential for high returns. The urgency to gain access to these rapidly growing sectors may outweigh concerns about cognitive or strategic misalignment caused by industry distance. As a result, industry hotness acts as a moderator by reducing the negative impact of industry distance on syndication likelihood. There are also empirical studies showing that, despite perceived risks, venture capital firms are more likely to cross knowledge boundaries and engage in syndication in hot industries in order to seize emerging opportunities[31, 32]. Therefore, in high-hotness industries, the likelihood of collaboration between domestic and foreign VCs significantly increases, particularly when both parties can complement each other's resources and jointly address uncertainties[33].

In summary, hot industries provide a common interest that drives domestic and foreign VCs to overcome cultural and institutional differences, collaborating for mutual benefit. This not only helps foreign VCs capitalize on local market advantages but also enhances domestic VCs' opportunities to participate in global investment networks.

Hypothesis 2: Industry hotness positively moderates the relationship between industry distance and the syndication likelihood of domestic and foreign firms.

2.3 Local experience and syndication

As foreign VCs gain local experience, they strengthen their networks within the host country, building social capital that enables them to better navigate regulatory, cultural, and market challenges. According to social capital theory, which suggests that relationships, networks, and the trust cultivated through these connections are valuable resources that facilitate cooperation and lower transaction costs[7]. This accumulation of social capital reduces information asymmetry and uncertainty, which are common in cross-border investments, especially when there is significant industry distance between partners[3].

With deeper social capital, trust between foreign and domestic VCs grows, helping to overcome the barriers of industry distance. Domestic VCs become more open to syndication with foreign VCs, recognizing the benefits of established relationships and shared norms[34]. This trust also helps foreign VCs identify strategic complementarities with domestic firms, even in sectors where they previously lacked expertise, increasing the likelihood of successful collaboration[2]. Additionally, local experience improves operational efficiency by streamlining collaboration processes, reducing coordination costs that are often heightened by industry distance[35]. This increased efficiency, along with stronger networks, makes cross-border partnerships more attractive, even in industries beyond the foreign VC's core expertise.

As foreign VCs' social capital grows within the venture capital community, their network position strengthens, their guanxi increases, allowing them to attract more central and influential partners both within and outside their networks, thereby diversifying their syndication strategies[4]. As a junior partner of a Chinese VC, Mr. Z. stated:

"... Guanxi is indeed important some projects fail, but it is OK, since guanxi is there. It [a successful... project] is the result of process of collective actions which are necessary for guanxi building." (Mr. Z: C02)

He pointed out that the guanxi foreign VCs acquire during their local activities are extremely important. Unlike general social capital, guanxi is not just about relationships but involves deeply embedded networks of personal connections characterized by mutual trust, reciprocity, and long-term commitment. In business, guanxi often requires individuals to engage in continuous exchanges of favors, cultivating a sense of obligation. This network of trust helps reduce transaction costs, improve access to resources, and provide informal mechanisms to resolve conflicts.

Moreover, guanxi plays a key role in navigating China's complex regulatory environment, where formal legal institutions may not always be sufficient for resolving business disputes. Instead, businesses often rely on personal networks to gain access to government officials, secure approvals, or expedite processes. This interconnected system of trust and obligations ensures that businesses can adapt and thrive within China's institutional framework. Foreign VCs may prefer collaborating with domestic VCs in uncertain market conditions where local knowledge remains critical for managing risks[12].

In summary, social capital theory offers a robust framework for understanding how foreign VCs adapt their strategies through building trust and networks, reducing uncertainty, and improving collaboration with domestic partners as they gain local experience.

Hypothesis 3: Local experience positively moderates the relationship between industry distance and the syndication likelihood of domestic and foreign firms.

3 Empirical Analysis

3.1 Data

We tested the hypotheses using data on China's venture capital investments from 2000 to 2014. Examining investments during this period provides a greater opportunity to assess the trend in venture capital's industrial expansion. Alongside the unexpected and dramatic growth of China's industry, VC has played an increasingly significant role in promoting the economy of China's financial market. The difference between institutional and cultural norms offers us an opportunity to observe the formation of collaboration in group level.

Our primary data source is the Simuton database, from which we draw an initial sample of 1950 VCs with 3744 digital economy-related syndication investments. We picked these industries for three reasons. First, both foreign VCs and domestic VCs own resources which allows them to gain more bargaining power when negotiating. Second, the number of provides a large sample. Third, some alliances may cross these two industries because of the emerging trend of integrating hardware and software in global competition.

3.2 Semi-supervised community detection

The VC network is the mostly constructed based on syndication, which means that a tie between two VCs will be created that if two VCs have at least one common investees[36, 37]. A community is the sub-structure of whole network that essentially a collection of VCs who frequently form syndicates together. For generating more social capitals and absorbing new knowledge, syndication would not exclusively with a small number of VCs.

In order to observe the differences of alliance collaboration, we used a semi-supervised community detection algorithm purposed by Xiong and Fan[38] to classify the VC community. This algorithm would combine the syndicate alliance network's clustering method with fieldwork-gathered ground truth. Over the entire sample period, the algorithm categorized these VCs into seven different communities, because communities can be regarded as alliances with porous boundaries and implicit agreements[1].

Over the entire sample period, the algorithm categorized these VCs into seven distinct communities, each characterized by specific factors such as capital type and geographic location. Notably, the largest community (Community 1) is dominated by domestic VCs, primarily located in Shenzhen. In contrast, Community 2 comprises mostly foreign VCs with an international focus, centered around major cities like Beijing and Shanghai. Other communities, such as Community 3 which feature a mix of domestic and foreign firms, Communities 4 and 5 are relatively independent foreign VC dominant community with specific industry focused, Community 7 is domestic VC dominated community characterized by its concentration in Suzhou, and Community 6 is a small community which has no VC satisfied the following selection criterions. The sizes (number of VCs) of the various communities are shown in Table 1.

To analyze the motivation for multi-party collaboration with inter-alliance, we restrict the sample to syndicates with at least three members and select the investment round to early and expansion stages. Given that our focus is on analyzing the syndication models involving connections within and between dominated VC type alliances which will be explained in next section—Community 3 represents a

Table 1 Community size.

Community	Size
1	710
2	330
3	145
4	132
5	137
6	22
7	58

mixed community that is not included in our detailed analysis.

We proceed with five types of syndication models which is directly related to the distinct community structures identified by the algorithm. The first type contains the connections within domestic VCs dominated alliances, the second type contains the connections within foreign VCs dominated alliances, the third type contains the connections between domestic VCs dominated alliances, the fourth type contains the connections between foreign VCs dominated alliances, and the fifth type contains the connections between domestic VCs dominated alliances and foreign VCs dominated alliances.

These communities, as identified by the algorithm, reveal significant differences in the behavior and characteristics of domestic versus foreign VC firms, as well as in the nature of their interactions. The first two types of syndication models focus on the connections within domestic and foreign VC-dominated alliances, respectively, recognizing that VCs within the same national or cultural context tend to form more cohesive and homogenous communities. The third and fourth types of syndication models examine the connections between different domestic and foreign VC-dominated alliances. The fifth type of syndication model, which focuses on connections between domestic and foreign VCs, is particularly insightful because it captures the dynamics of cross-border investments. This model reflects the strategic partnerships that occur when domestic and foreign VCs join forces to leverage complementary resources and market access, a behavior that is crucial for understanding the global integration of the VC industry. Analyzing these five types of connections allows for a detailed understanding of how community structures influence the likelihood and nature of VC syndications, providing a comprehensive view of the interplay between domestic and foreign investment alliances.

Figure 1 illustrates the collaboration trend, indicating that as the market matures, the number of collaborations in which foreign venture capitalists take an advantage position is diminishing, even though the expansion of alliance itself is keep growing. Figure 1 also highlights the differences in industry expansion between intra-alliance and inter-alliance collaborations. Directly measuring preferences in invested industries is challenging. Instead, metrics like entropy can be used to estimate variations in the expansion of invested industries. By applying a three-year window to syndication data, we can calculate the entropy of industry distribution. This three-year span also enables the analysis of strategic alignment and collaboration patterns among venture capitalists, particularly in environments where information asymmetry is high. There are two dimensions to investing behavior: depth of invested capital, which indicates how many investments venture capitalists made in a particular field, and breadth of invested capital, which indicates how many fields venture capitalists invested in through various investments.

We selected samples for analysis that include syndications with three or more participating VCs and involve foreign VCs. There are 1229 investments remaining to constitute the subsets used to test our hypotheses, whereas 612 investments are inter-alliance collaboration investments. To observe the characteristics of multi-party collaboration, we measure the attributes of each VC using a five-year window. This period is ideal for capturing long-term trends and strategic shifts in venture capitalists'

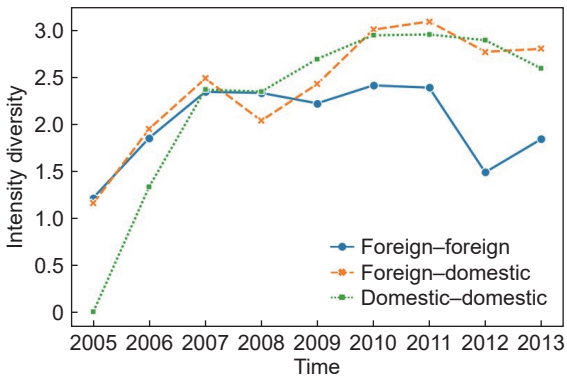

Fig. 1 Trend of the growing industrial expansion by different types of co-investments.

behaviors, such as changes in geographical focus, investment expertise, and portfolio performance. Over five years, attributes like industry specialization, reputation, and network evolution become more pronounced, significantly influencing investment decisions, particularly in foreign markets. This approach ensures a comprehensive understanding of how these factors evolve and affect collaborative strategies. To better measure the inter-alliance difference, we use the industry sectors code from China's "industrial classification for national economic activities" to standardize the industry attribute in Simuton data.

3.3 Variable

3.3.1 Dependent variable

Cross-community. The primary dependent variable in this study is cross-community collaboration, which measures whether a syndication involves VCs from different communities (i.e., foreign-dominated and domestic-dominated). We create a dichotomous variable to indicate whether a syndication is cross-community (coded as 1) or within-community (coded as 0). Syndications that involve only foreign VCs within the same community are coded as within-community collaborations, while syndications that include both foreign and domestic VCs from different communities are coded as cross-community collaborations.

3.3.2 Independent variable

Industry distance. To measure industry distance within the syndicate, we first computed the industry specialization of syndicate members. The variable measures the degree to which a VC firm specializes in a particular industry sector. We calculate this by examining the proportion of investments made by each VC in specific industries (e.g., technology, healthcare, and digital services) over the five-year period preceding the syndication[12, 39]. Higher specialization scores indicate a stronger focus on a particular industry, which may influence the VC's propensity to collaborate with local partners who have complementary expertise. The industry distance describes the difference in the specialization of venture capital firms within a syndication. Higher industry distance indicates a greater degree of focus on different industries, which may affect a VC's ability to collaborate with others due to differences in expertise or market knowledge.

3.3.3 Control variable

Industry hotness. Industry hotness is defined as the percentage of VC-backed companies in a given industry that have successfully exited through an initial public offering (IPO) or merger and acquisition (M&A) in the prior year[40]. Thus, it is a time-variant variable that captures the attractiveness of the industry for VCs and the perceived risks associated with investing in that sector. We expect industry hotness to affect the likelihood of cross-community collaboration, as foreign VCs may seek domestic partners in less established or high-risk industries.

Local experience. Local experience is measured as the number of years a foreign VC has been active in the Chinese market. This variable accounts for the foreign VC's familiarity with local regulations, institutions, and market dynamics. We expect foreign VCs with more local experience to be less reliant on domestic partners and more likely to engage in within-community collaborations.

Syndication size. We subtract the annual average size of syndicates from the number of partners in each syndicate.

Prior tie density. Prior tie density was measured as the ratio of preexisting dyadic ties to the total number of possible dyadic ties within the prospective syndicate. Consistent with prior research on syndication in the VC context[41, 42], a prior tie was determined to exist when two VC firms had co-invested in the same round for the same venture at least once in the five years preceding the new focal investment. Prior tie density is a continuous variable whose value ranges from 0 to 1.

Status heterogeneity. Eigenvector centrality, which was proposed by Bonacich[43], is a commonly used attribute to measure the network status in many researches[15, 39, 44]. Eigenvector centrality quantifies a node's influence by considering the importance of its connected nodes. The high eigenvector centrality indicates that a VC is not connected to others who have a high influence. Following Gulati and Gargiulo[45], we capture the similarity by calculating the ratio of the smaller to the larger centrality score of the two VCs and then using 1 minus the average of the pairwise as measures of status similarity in the syndicate.

Clustering coefficient. The clustering of a node is the proportion of all possible triangles that pass

through it. In general, the average clustering coefficient reveals how the structure holds a global triangle structure[46]. To normalize the value over time, we divide the average clustering coefficient of each syndication by the average clustering coefficient of each sliding window network for the past five years.

Structural hole. Structural holes indicate the redundancy of an actor's ties to the other structures. Burt[47] suggested that network constraint effectively measures a firm's lack of access to structural holes. The less constraints or structural holes there are, and the more information arbitrage opportunities there should be. For measuring the constraint of VCs in a syndication, we sum up the network constraint and divided by the number of VCs.

Geographic distance. Geographic proximity has played a role in the formation of the VCs' partnership, while diversity in location would increase communication and coordination costs[48, 49]. Research found that VCs that are geographically closer are more likely to collaborate, as investments are highly concentrated in certain regions, such as Silicon Valley, Massachusetts, and New York[50]. Similar to Ref. [12], we collect the corresponding latitudes and longitudes of the city center where each VC headquarters is located and use spherical geometry to calculate the distance between VCs on a dyadic level. To calculate the average distance in a group, we then calculated the average distance in the group and did the log transformation.

Geographic similarity. The spatial diffusive pattern of VC investments may affect performance, as VCs may experience industrial local bias if they concentrate in specific regions[51, 52]. Thompson[53] argued that competition for investment opportunities in the areas where VC firms initially concentrated leads to declining returns and eventually the spatial dispersion of VC activities. Sorenson and Stuart[34] further suggested that VC investment do not need to be agglomerated or co-agglomerated with VC-backed companies. In order to identify the preference of VC investments, we also extract name of the first-level administrative divisions from the address of portfolio companies as investment location, and count the number of times a VC invested in that area. Then we calculate the preference of specific region $p_i \times q_i$, where p_i and q_i are the proportion of two VCs invested in the location i, if VC has not invested in the location i, the value is 0.

Internal indirect tie density. Based on the definition from Zhang et al.[12], two firms are considered to have an indirect relationship when they are separated by a network distance of two. Thus, if two firms have co-invested with a common third party but have not invested together in the preceding five years, these firms have an indirect relationship. To calculate internal indirect tie density, we first determined whether there was an indirect connection between two partners in the same community through another VC. Calculating the proportion of pairs in the potential syndicate that were connected by at least one external indirect tie through a firm outside of the community is a similar method for calculating external indirect tie density.

Foreignness. It was measured as the percentage of foreign VCs in group-level syndication, which to represent how much foreign VCs collaborate with domestic VCs.

Firm age. While younger ventures tend to be associated with a greater degree of contextual uncertainty, following Hallen[54], we used venture age as a proxy for contextual uncertainty.

3.4 Model

Previous researches proved an obvious tendency that investment experience and overlapping knowledge bases would increase the possibility of selecting partners after their initial selection[4], and the potential investment opportunities generally circulate within geographic and industry spaces[34]. To better understand the motivation of foreign VCs partner selection in group-level, we use logistic regression to analyze the effect of foreign VCs' choice for inter-alliance collaboration.

The logit regression model, often known as logistic regression, is designed for binary classification tasks. It predicts the probability of the dependent variable belonging to a particular class. The model's formula can be expressed as

$$\log\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_n x_n,$$

where p represents the probability of the dependent variable being in the default class given the predictors. The logit function (the natural log of the odds of the

dependent variable equaling a certain value) is modeled as a linear combination of the predictors, where β_0, β_1, β_2, and β_n are the coefficients to be learned, adjusting the effect of each predictor on the log odds. This model is useful for scenarios where the outcome is categorical and dichotomous, providing a foundation for estimating probabilities in a way that is easy to interpret and implement.

3.5 Result

In Table 2, we provide the descriptive statistics and pair-wise correlations for the variables included in the analysis of the probability of forming co-investment partnership between all variable in our sample. The variable foreignness shows a mean of 0.858. This is the result of evidence indicating that foreign VCs are more likely to partner with other foreign VCs when syndication as a group. It can be seen from the results that the correlation coefficient between variables is relatively small.

Our hypotheses regarding the formation of syndication involving foreign VCs are empirically tested in Table 3. Model 1 includes all control variables, variables in the control group behave mostly as expected. For instance, the group clustering is positive, which indicates that the inter-community collaboration is more likely generated by VCs who is in the core position in the network. The coefficient of Industry distance of VC firms is negative, which indicates that VCs are more likely to form inter-community collaborate when they have same rooted in specific industry. However, the coefficient is not significant, so Hypothesis 1 is not supported.

Model 2 introduces the interaction term of industry distance and Industry hotness. The interaction term is positive (β = 34.7920, s.e. = 14.481, ρ < 0.10, where s.e. stands for standard error, and it indicates the precision or reliability of the estimated value of the regression coefficient (β)). The interact effect suggests that inter-community collaboration would be more likely to occur when VCs desire to enter the hotness market as the possibility to gain knowledge in an industry they are unfamiliar with. Because industry distance and industry hotness are both negatively correlated in Model 2, Hypothesis 2 is supported.

Model 3 introduces the interaction term of Industry distance and local experience. The interaction term is positive (β = 8.502, s.e. = 4.943, ρ < 0.10). Since VCs in a community are more likely to be formed by the VCs that come from the same country, foreign-domestic collaboration occurs as inter-community collaboration. Hypothesis 3 is supported

Model 4 includes all variables and interactions, and the conclusion remains unchanged. In conclusion, most hypotheses are supported. And the statistical significance of foreignness is diminished by the addition of new variables, indicating that domestic VCs are less valuable as alliance members while foreign VCs have deeply embedded in local market and aim to further knowledge.

Table 2 Statistical description.

Variable	Mean	Standard deviation	Foreignness	Syndication size	Prior tie density	Geographic similarity	Industry distance	Geographic distance	Venture age	Structural hole	Group clustering	Status heterogeneity	Indirect tie density	Industry hotness	Local experience
1	0.858	0.229													
2	1.253	0.247	−0.040												
3	0.213	0.272	0.610	−0.060											
4	0.817	1.657	0.520	0.020	0.780										
5	0.545	1.550	−0.030	0.090	−0.020	0.090									
6	8.648	2.543	−0.090	0.050	−0.130	−0.170	−0.060								
7	−2.567	4.361	0.390	0.020	0.130	0.140	−0.040	−0.020							
8	0.588	0.375	0.000	0.150	−0.060	0.020	0.120	0.040	−0.010						
9	0.440	0.330	0.280	−0.470	0.190	0.130	−0.100	0.020	0.210	−0.160					
10	0.116	0.079	0.280	−0.190	0.280	0.260	−0.070	−0.150	0.060	−0.060	0.410				
11	0.204	0.250	0.260	0.150	0.130	0.150	0.070	0.470	0.190	−0.050	0.190	0.100			
12	0.066	0.050	0.050	−0.100	−0.020	−0.040	−0.010	0.500	0.010	0.070	0.090	0.110	0.250		
13	0.408	0.310	−0.040	0.100	0.010	0.090	0.120	−0.380	−0.060	−0.020	−0.040	−0.020	−0.090	−0.380	
Cross-community	0.328	0.470	−0.150	0.040	−0.120	−0.050	−0.160	0.110	−0.020	0.040	0.090	0.110	0.140	0.450	0.380

Table 3 Empirical results (logit regression).

Variable	Model 1	Model 2	Model 3	Model 4
Industry distance	**−1.1403**	**−3.7393****	**−3.4542***	**−5.8652****
	(0.1981)	**(0.0064)**	**(0.0443)**	**(0.0037)**
Industry hotness	−5.3826*	−8.0756*	−6.0639*	−8.4586*
	(0.0567)	(0.0152)	(0.0357)	(0.0117)
Local experience	3.3606***	3.4311***	2.9823***	3.0697***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Industry distance × industry hotness	**–**	**34.7920***	**–**	**34.5570***
		(0.0163)		**(0.0270)**
Industry distance × local experience	**–**	**–**	**8.5019***	**7.7352***
			(0.0854)	**(0.0925)**
Syndication size	0.1809	0.1337	0.1556	0.1137
	(0.8063)	(0.8588)	(0.8365)	(0.8821)
Venture age	−0.0113	−0.0124	−0.0096	−0.0104
	(0.7173)	(0.6922)	(0.7622)	(0.7397)
Geographic similarity	−0.0236	−0.0250	0.0514	0.0548
	(0.9748)	(0.9744)	(0.9476)	(0.9456)
Geographic distance	0.3103**	0.3065**	0.3143**	0.3069**
	(0.0077)	(0.0082)	(0.0083)	(0.0095)
Structural hole	−1.0180*	−1.0218*	−1.0762*	−1.1001*
	(0.0879)	(0.0869)	(0.0724)	(0.0675)
Group clustering	1.6710**	1.7437***	1.6145**	1.6785**
	(0.0011)	(0.0008)	(0.0018)	(0.0014)
Status heterogeneity	−2.5354	−2.7279	−2.4932	−2.6756
	(0.3016)	(0.2833)	(0.3131)	(0.2932)
Prior tie density	−1.0264	−1.0379	−1.0625	−1.1252
	(0.1830)	(0.1699)	(0.1749)	(0.1408)
Indirect tie density	0.5116	0.5547	0.4090	0.4310
	(0.4385)	(0.4028)	(0.5312)	(0.5123)
Foreignness	−1.6227*	−1.5280*	−1.6418*	−1.5339*
	(0.0118)	(0.0186)	(0.0127)	(0.0205)
R-squared	0.224	0.232	0.232	0.238
Log likelihood	−158.535	−156.951	−157.042	−155.694

Note: *: $p<5\%$. **: $p<1\%$. ***: $p<0.1\%$.

4 Discussion and Implication

This study examines the impact of industry distance on the likelihood of collaboration between domestic and foreign venture capital (VC) firms, along with the moderating effects of industry hotness and the local experience of foreign VCs. The findings suggest that while greater industry distance tends to reduce the likelihood of collaboration, this effect is not significant. The reason can be explained from three perspectives: on one hand, previous research suggests that the measurement of industry distance might influence the results[18, 55]; on the other hand, signaling theory[56] posits that foreign VCs use cross-community collaborations to signal legitimacy and reliability, particularly in high-risk markets. This signaling effect is more critical than industry fit, reducing the impact of industry distance.

Furthermore, we have expanded our discussion on how China's unique institutional environment, including regulatory frameworks, government involvement, and *guanxi* (relationships), significantly shapes the behavior of foreign VCs. In China, government policies often play a critical role in market entry and business operations, while *guanxi* is essential for gaining access to resources and building trust. *Guanxi* is essential for foreign venture capital (VC) firms seeking legitimacy and resources in China, where it serves as a unique form of social capital that operates distinctively from Western concepts. As Yang[57] explained, *guanxi* is maintained through gift exchanges, emotional bonds, and social activities, emphasizing reciprocal obligations and long-term emotional connections that extend beyond personal life to permeate business and political spheres. This *guanxi* network fosters resource sharing and support through interpersonal relationships, facilitating access

to crucial information, building trust, and navigating China's complex regulatory landscape. Gold et al.[58] further highlighted that *guanxi* embodies a form of social capital unlike that in the West, incorporating both personal networks and broader social institutions that cultivate cooperation and trust through obligations and emotional ties. Comparatively, while Western social capital relies on institutionalized, transparent networks based on shared goals, *guanxi* emphasizes personal relationships, long-term commitment, and mutual assistance within informal social structures, which are central to Chinese business culture. *Guanxi* also plays a strategic role in mitigating regulatory uncertainty, as Boisot and Child[59] and Guthrie[60] pointed out, providing firms with means to secure support from government bodies and anticipate policy changes in an often opaque regulatory environment. Real-world examples further underscore *guanxi*'s importance for foreign firms: Goldman Sachs leveraged *guanxi* effectively through partnerships with local entities to establish a strong foothold in China[61], while Yahoo struggled without similar networks, ultimately losing market share and exiting the Chinese market[62]. For foreign VCs, *guanxi* not only improves operational success by reducing risk but also offers essential market insights, resource access, and entry advantages. Thus, the ability to build and sustain *guanxi* becomes a crucial determinant of success for foreign VCs in China, underscoring its role in overcoming cultural and institutional barriers and enhancing competitive positioning within the market.

Given the unique contextual factors in China, industry distance may indeed be less critical in China compared to other markets. Instead, the ability to navigate the regulatory environment and leverage guanxi may be more determinant of foreign VC success, helping explain why variables like industry distance show reduced significance in this context.

The study also reveals that industry hotness positively moderates the relationship between industry distance and collaboration likelihood. In high-growth industries, the potential for high returns can make collaboration more appealing, even across significant industry distances. This suggests that in attractive, fast-growing sectors, the benefits of collaboration may outweigh the challenges posed by industry distance, encouraging domestic and foreign VCs to work together. Furthermore, the local experience of foreign VCs enhances their ability to navigate the local market, build trust with domestic partners, and align strategically with local firms. This familiarity and increased operational efficiency make collaboration more feasible and attractive, even in industries that are far from the foreign VC's core expertise.

4.1 Implication for international business

This study provides valuable insights for international business, particularly for foreign VCs seeking to enter or expand in the Chinese market. The findings indicate that, in China's unique environment, industry distance has a limited impact on collaboration, while *guanxi* and the ability to navigate local institutions are crucial. *Guanxi*, as a distinct form of social capital, helps foreign VCs build trust, access resources, and effectively manage complex regulatory landscapes, as demonstrated by Goldman Sachs' success and Yahoo's challenges. Additionally, the study reveals that industry hotness and local experience can enhance collaboration outcomes. In high-growth sectors, the returns on collaboration may outweigh the challenges posed by industry distance, and extensive local experience enables foreign VCs to build trust and optimize operations. Therefore, in emerging markets like China, foreign VCs should prioritize building *guanxi* and gaining local experience over strict industry alignment. For policymakers, the study suggests supporting domestic and foreign collaboration and reducing institutional barriers to attract foreign investment in high-potential sectors, thereby promoting the long-term development of emerging markets.

4.2 Theoretical contribution

This study offers important theoretical contributions to the understanding of international venture capital and cross-community collaboration. By examining how factors such as *guanxi*, industry hotness, and local experience shape foreign VCs' success in emerging markets, the study extends the theory on the "liability of foreignness", highlighting that relational and institutional navigation, rather than industry alignment, can be critical to effective collaboration. Furthermore, the application of signaling theory is expanded to high-risk markets, showing that foreign VCs leverage cross-

community partnerships not only for resource access but also to establish legitimacy and credibility, a strategy that proves more effective than traditional industry fit. This research also broadens the theoretical understanding of how industry hotness and local experience act as positive moderators in collaborative contexts, supporting more nuanced perspectives on cross-border investment behaviors in environments where informal networks and cultural embeddedness are vital.

4.3 Limitation and future research

While this study provides important insights into the strategies of foreign VCs in China, it is not without limitations. First, the focus on China's venture capital market may limit the generalizability of the findings to other emerging markets, where institutional and cultural conditions may differ. Future research could extend this analysis to other regions, such as Southeast Asia or Latin America, to examine whether the findings hold in different institutional contexts.

Second, this study focuses on syndication-based collaborations and does not account for other forms of partnership, such as joint ventures or strategic alliances, which may also influence the dynamics of cross-community collaborations. Future research could explore how different types of partnerships impact foreign VC strategies and investment outcomes.

Finally, this paper examines the signaling role of co-investment in the Chinese market; however, it does not distinguish between the signaling needs of new entrants and those of established venture capital firms. For new entrants, signaling remains an essential tool for overcoming initial market barriers and establishing legitimacy. For more mature venture capital firms, factors driving their collaboration may include maintaining strategic advantages, accessing local networks to sustain competitive positioning, and leveraging deeper industry insights. Future research could explore the behavioral and strategic differences of venture capital firms at different stages in the Chinese market.

Appendix

Code of interviewees is shown in Table A1.

Table A1 Code of interviewees.

Interviewee	Occupation	Code
Mr. L	A junior manager in a state-owned VC firm	C01
Mr. Z	A junior partner of private VC investor	C02
Mr. Y	A senior partner of a private VC investor	C03
Mr. C	A CEO of a state-owned VC firm	C04
Mr. X	A manager of a branch of a large VC investor	C05
Mr. S	A CEO of a private VC in the tech industry	C06
Mr. G	The head of a central government affiliated research institute	C07
Mr. Li	The CEO of a leading foreign venture capital	C08
Mr. D	The CEO of a leading state-owned VC invested by a province	C09
Mr. H	The CEO of a leading state-owned VC invested by a city	C10
Mrs. T	The CEO of a private-owned incubator	C11

Conflict of Interest

The authors declare no conflict of interest.

References

[1] G. D. Bruton and D. Ahlstrom, An institutional view of China's venture capital industry: Explaining the differences between China and the West, *J. Bus. Ventur.*, vol. 18, no. 2, pp. 233–259, 2003.

[2] I. Guler and M. F. Guillén, Home country networks and foreign expansion: Evidence from the venture capital industry, *Acad. Manag. J.*, vol. 53, no. 2, pp. 390–410, 2010.

[3] N. Dai and R. Nahata, Cultural differences and cross-border venture capital syndication, *J. Int. Bus. Stud.*, vol. 47, no. 2, pp. 140–169, 2016.

[4] S. Khavul and D. Deeds, The evolution of initial co-investment syndications in an emerging venture capital market, *J. Int. Manag.*, vol. 22, no. 3, pp. 280–293, 2016.

[5] M. Meuleman and M. Wright, Cross-border private equity syndication: Institutional context and learning, *J. Bus. Ventur.*, vol. 26, no. 1, pp. 35–48, 2011.

[6] Y. Tan, X. Wang, and R. Li, Venture capital cross-investment network community movement and investment performance, *J. Int. Finance Econ.*, vol. 23, no. 3, pp. 55–69, 2023.

[7] M. Granovetter, Economic action and social structure: The problem of embeddedness, *Am. J. Sociol.*, vol. 91, no. 3, pp. 481–510, 1985.

[8] T. J. Rowley, H. R. Greve, H. Rao, J. A. C. Baum, and A. V. Shipilov, Time to break up: Social and instrumental antecedents of firm exits from exchange cliques, *Acad. Manag. J.*, vol. 48, no. 3, pp. 499–520, 2005.

[9] G. Ahuja, F. Polidoro Jr, and W. Mitchell, Structural homophily or social asymmetry? The formation of alliances by poorly embedded firms, *Strateg. Manag. J.*, vol. 30, no. 9, pp. 941–958, 2009.

[10] L. Nachum, When is foreignness an asset or a liability? Explaining the performance differential between foreign and local firms, *J. Manag.*, vol. 36, no. 3, pp. 714–739, 2010.

[11] A. Nair, S. Hanvanich, and S. T. Cavusgil, An exploration of the patterns underlying related and unrelated collaborative ventures using neural network: Empirical investigation of collaborative venture formation data

spanning 1985–2001, *Int. Bus. Rev.*, vol. 16, no. 6, pp. 659–686, 2007.
[12] L. Zhang, A. K. Gupta, and B. L. Hallen, The conditional importance of prior ties: A group-level analysis of venture capital syndication, *Acad. Manag. J.*, vol. 60, no. 4, pp. 1360–1386, 2017.
[13] P. Wang, Syndication and foreignness: Venture capital investments in emerging and developed markets, *J. Int. Manag.*, vol. 23, no. 1, pp. 1–15, 2017.
[14] S. X. Li and T. J. Rowley, Inertia and evaluation mechanisms in interorganizational partner selection: Syndicate formation among U.S. investment banks, *Acad. Manag. J.*, vol. 45, no. 6, pp. 1104–1119, 2002.
[15] Y. Liu and M. Maula, Contextual status effects: The performance effects of host-country network status and regulatory institutions in cross-border venture capital, *Res. Policy*, vol. 50, no. 5, p. 104216, 2021.
[16] T. K. Das and B. S. Teng, Alliance constellations: A social exchange perspective, *Acad. Manag. Rev.*, vol. 27, no. 3, pp. 445–456, 2002.
[17] L. Zhang and I. Guler, How to join the club: Patterns of embeddedness and the addition of new members to interorganizational collaborations, *Adm. Sci. Q.*, vol. 65, no. 1, pp. 112–150, 2020.
[18] B. Nooteboom, W. van Haverbeke, G. Duysters, V. Gilsing, and A. van den Oord, Optimal cognitive distance and absorptive capacity, *Res. Policy*, vol. 36, no. 7, pp. 1016–1034, 2007.
[19] R. Boschma, Proximity and innovation: A critical assessment, *Reg. Stud.*, vol. 39, no. 1, pp. 61–74, 2005.
[20] M. W. Peng, D. Y. L. Wang, and Y. Jiang, An institution-based view of international business strategy: A focus on emerging economies, *J. Int. Bus. Stud.*, vol. 39, no. 5, pp. 920–936, 2008.
[21] W. J. Baumol and O. E. Williamson, Williamson's the economic institutions of capitalism, *RAND J. Econ.*, vol. 17, no. 2, pp. 279–286, 1986.
[22] P. J. DiMaggio and W. W. Powell, The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields, *Am. Sociol. Rev.*, vol. 48, no. 2, pp. 147–160, 1983.
[23] W. H. Hoffmann and R. Schlosser, Success factors of strategic alliances in small and medium-sized enterprises: An empirical survey, *Long Range Plan.*, vol. 34, no. 3, pp. 357–381, 2001.
[24] M. Siisiainen, Two concepts of social capital: Bourdieu vs. Putnam, *International Journal of Contemporary Sociology*, vol. 40, no. 2, pp. 183–204, 2000.
[25] V. Sanchez-Famoso, A. Maseda, and T. Iturralde, The role of internal social capital in organisational innovation. An empirical study of family firms, *Eur. Manag. J.*, vol. 32, no. 6, pp. 950–962, 2014.
[26] L. G. Zuker, Production of trust: Institutional sources of economic structure, 1840–1920, https://psycnet.apa.org/record/1988-10420-001, 1986.
[27] T. Loughran and J. R. Ritter, Why don't issuers get upset about leaving money on the table in IPOs, *Rev. Financ. Stud.*, vol. 15, no. 2, pp. 413–444, 2002.
[28] J. A. Brander, R. Amit, and W. Antweiler, Venture-capital syndication: Improved venture selection vs. the value-added hypothesis, *J. Econ. Manag. Strategy*, vol. 11, no. 3, pp. 423–452, 2002.
[29] C. Casamatta and C. Haritchabalet, Experience, screening and syndication in venture capital investments, *J. Financ. Intermediation*, vol. 16, no. 3, pp. 368–398, 2007.
[30] I. Guler and M. F. Guillén, Institutions and the internationalization of US venture capital firms, *J. Int. Bus. Stud.*, vol. 41, no. 2, pp. 185–205, 2010.
[31] L. Fleming, S. Mingo, and D. Chen, Collaborative brokerage, generative creativity, and creative success, *Adm. Sci. Q.*, vol. 52, no. 3, pp. 443–475, 2007.
[32] P. Gompers, A. Kovner, J. Lerner, and D. Scharfstein, Venture capital investment cycles: The impact of public markets, *J. Financ. Econ.*, vol. 87, no. 1, pp. 1–23, 2008.
[33] J. Hursti and M. V. J. Maula, Acquiring financial resources from foreign equity capital markets: An examination of factors influencing foreign initial public offerings, *J. Bus. Ventur.*, vol. 22, no. 6, pp. 833–851, 2007.
[34] O. Sorenson and T. E. Stuart, Syndication networks and the spatial distribution of venture capital investments, *Am. J. Sociol.*, vol. 106, no. 6, pp. 1546–1588, 2001.
[35] A. Khurshed, A. Mohamed, A. Schwienbacher, and F. Wang, Do venture capital firms benefit from international syndicates, *J. Int. Bus. Stud.*, vol. 51, no. 6, pp. 986–1007, 2020.
[36] A. Bubna, S. R. Das, and N. Prabhala, Venture capital communities, *J. Financ. Quant. Anal.*, vol. 55, no. 2, pp. 621–651, 2020.
[37] Y. Jin, Q. Zhang, and S. P. Li, Topological properties and community detection of venture capital network: Evidence from China, *Phys. A Stat. Mech. Appl.*, vol. 442, pp. 300–311, 2016.
[38] H. Xiong and Y. Fan, How to better identify venture capital network communities: Exploration of a semi-supervised community detection method, *Journal of Social Computing*, vol. 2, no. 1, pp. 27–42, 2021.
[39] O. Sorenson and T. E. Stuart, Bringing the context back in: Settings and the search for syndicate partners in venture capital investment networks, *Adm. Sci. Q.*, vol. 53, no. 2, pp. 266–294, 2008.
[40] J. Florin and Z. Simsek, The effects of moral hazard and adverse selection on the pricing and underpricing of initial public offerings, *Venture Cap.*, vol. 9, no. 2, pp. 127–143, 2007.
[41] Y. V. Hochberg, A. Ljungqvist, and Y. Lu, Whom you know matters: Venture capital networks and investment performance, *J. Finance*, vol. 62, no. 1, pp. 251–301, 2007.
[42] L. Zhang, K. Xu, and J. Zhao, Sleeping beauties in meme diffusion, *Scientometrics*, vol. 112, no. 1, pp. 383–402, 2017.
[43] P. Bonacich, Power and centrality: A family of measures, *Am. J. Sociol.*, vol. 92, no. 5, pp. 1170–1182, 1987.
[44] D. Dimov and H. Milanov, The interplay of need and opportunity in venture capital investment syndication, *J. Bus. Ventur.*, vol. 25, no. 4, pp. 331–348, 2010.
[45] R. Gulati and M. Gargiulo, Where do interorganizational networks come from, *Am. J. Sociol.*, vol. 104, no. 5, pp. 1439–1493, 1999.
[46] S. Wang, M. J. Songhori, S. Chang, and T. Terano, How triangle structure in inter-firm human network affects bankruptcy evolution: An agent-based simulation study

with real and artificial data, in *Advances in Human Factors in Simulation and Modeling*, D. N. Cassenti, ed. Cham, Switzerland: Springer, 2017, pp. 285–296.
[47] R. S. Burt, *Structural Holes: The Social Structure of Competition*. Cambridge, MA, USA: Harvard University Press, 1992.
[48] M. Fritsch and D. Schilder, Does venture capital investment really require spatial proximity? An empirical investigation, *Environ. Plan. A Econ. Space*, vol. 40, no. 9, pp. 2114–2131, 2008.
[49] T. Tykvová and A. Schertler, Does syndication with local venture capitalists moderate the effects of geographical and institutional distance, *J. Int. Manag.*, vol. 20, no. 4, pp. 406–420, 2014.
[50] H. Chen, P. Gompers, A. Kovner, and J. Lerner, Buy local? The geography of venture capital, *J. Urban Econ.*, vol. 67, no. 1, pp. 90–102, 2010.
[51] D. Cumming and N. Dai, Local bias in venture capital investments, *J. Empir. Finance*, vol. 17, no. 3, pp. 362–380, 2010.
[52] R. Martin, C. Berndt, B. Klagge, and P. Sunley, Spatial proximity effects and regional equity gaps in the venture capital market: Evidence from Germany and the United Kingdom, *Environ. Plan. A Econ. Space*, vol. 37, no. 7, pp. 1207–1231, 2005.
[53] C. Thompson, The geography of venture capital, *Prog. Hum. Geogr.*, vol. 13, no. 1, pp. 62–98, 1989.
[54] B. L. Hallen, The causes and consequences of the initial network positions of new organizations: From whom do entrepreneurs receive investments, *Adm. Sci. Q.*, vol. 53, no. 4, pp. 685–718, 2008.
[55] F. Castellacci, Technological paradigms, regimes and trajectories: Manufacturing and service industries in a new taxonomy of sectoral patterns of innovation, *Res. Policy*, vol. 37, nos. 6&7, pp. 978–994, 2008.
[56] B. L. Connelly, S. T. Certo, R. D. Ireland, and C. R. Reutzel, Signaling theory: A review and assessment, *J. Manag.*, vol. 37, no. 1, pp. 39–67, 2011.
[57] M. M. Yang, *Gifts, Favors, and Banquets: The Art of Social Relationships in China*. Ithaca, NY, USA: Cornell University Press, 2016.
[58] T. Gold, D. Guthrie, and D. L. Wank, *Social Connections in China: Institutions, Culture, and the Changing Nature of Guanxi*. Cambridge, UK: Cambridge University Press, 2002.
[59] M. Boisot and J. Child, From fiefs to clans and network capitalism: Explaining China's emerging economic order, *Adm. Sci. Q.*, vol. 41, no. 4, pp. 600–628, 1996.
[60] D. Guthrie, The declining significance of Guanxi in China's economic transition, *China Q.*, vol. 154, pp. 254–282, 1998.
[61] Goldman Sachs, With Gao Hua Joint Venture, the firm establishes a foothold in China's domestic financial markets, https://www.goldmansachs.com/our-firm/history/moments/2004-gao-hua.html, 2025.
[62] F. Li, Why have all western Internet firms (WIFs) failed in China? A phenomenon-based study, *Acad. Manag. Discov.*, vol. 5, no. 1, pp. 13–37, 2019.

Yu Zhang received the MS degree from Central University of Finance and Economics, China in 2022. She is currently pursuing the PhD degree at the Department of Sociology, Tsinghua University, China. Her research interests include social computing, organizational behavior, and consumer behavior.

Tao Wang received the PhD degree in management from EMLYON Business School, France in 2015, and the master degree in history and economics and management in Germany. He joined Kyoto University, Japan in 2020. He is interested in understanding the dynamics of organizations and market identity, and how these dynamics shape and are conditioned by social structures and processes. His current research projects focus on social evaluation in the hospitality industry, organizational and professional identity in creative and service industries, and firms' political strategies in emerging markets.

Yue Zhang received the PhD degree in sociology from Tsinghua University, China in 2022. He is currently a postdoctoral researcher at the Institute for Cultural Heritage and History of Science & Technology, University of Science and Technology Beijing, China. His research interests focus on social network analysis and sociology of knowledge.