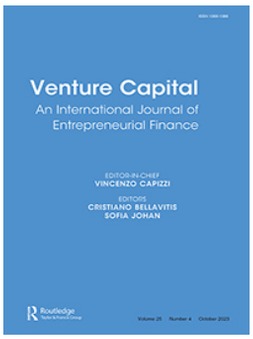

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The internationalization of business angel networks: do syndicates increase cross-border investment returns?

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ABSTRACT

This paper investigates the performance effects of cross-border business angel investments. Examining 815 investments on a business angel investment platform, we find an inverted U-shaped relationship between (geographic and cultural) distance and investment returns. We further show that business angels in large syndicates are less sensitive to the costs of both geographic and cultural distance and earn consistently higher returns. Our study contributes to the literature on business angel internationalization and highlights the role of co-investment networks: network resources allow business angels to mitigate transaction costs associated with cross-border investments and improve their investment returns.

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Business angels; syndication; angel groups; internationalization; transaction cost theory; investment decision-making

Introduction

Business angels (BAs)—key providers of capital for early-stage ventures—tend to make investments in close proximity to their own location (Cumming and Zhang 2019; Harrison, Mason, and Robson 2010; Wetzel 1983). Proximity facilitates the transfer of information, allowing for a better assessment of the entrepreneur, the firm's managerial capabilities, and the competitiveness of its products (Harrison, Mason, and Robson 2010; Kerr, Lerner, and Schoar 2014). In comparison, distant investment opportunities make it difficult for individual BAs to gather and assess information (Cumming and Zhang 2019; Antretter et al. 2020) or to add value to their portfolio companies by means of monitoring and mentoring (Politis 2008). Local preference exists in the contexts of both geographic distance (Dai, Jo, and Kassicieh 2012; Jääskeläinen and Maula 2014) and cultural distance (Hofstede 1980), and has made distance a prevalent rejection criterion in BA decision-making (Carpentier and Suret 2015; Harrison, Mason, and Robson 2010).

However, the way BAs make investment decisions has changed in recent years as international angel investment platforms gained popularity (Croce, Tenca, and Ughetto 2017; Gregson, Mann, and Harrison 2013; Mason, Botelho, and Harrison 2016; Bonini et al. 2018b). These platforms facilitate both domestic and cross-border investments (Bonini, Capizzi, and Zocchi 2019b; Lerner et al. 2018), thereby making their members' investment approach increasingly international (Harrison 2017; Kelly 2007; Liu 2015). This practice has

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become extremely popular and estimates suggest that around 25% of BA investments, which used to be mostly solitary, are now taking place in angel groups (Ali 2017). Nevertheless, while many studies investigate the internationalization of professionally managed venture capital funds (e.g., Buchner et al. 2018; Dai and Nahata 2016; Khurshed et al. 2020; Hain, Johan, and Wang 2016; Sorenson and Stuart 2001), the role of distance in BA investing remains largely unexplored (e.g., Harrison, Mason, and Robson 2010; White and Dumay 2017).

In addition, angel investment platforms allow BAs to pool their capital and knowledge, a practice commonly referred to as "syndication." BA syndicates let investors leverage the knowledge and resources of their fellow investors for distant investment opportunities. However, how and when BA syndicates can improve investment returns remains largely unknown (Butticè, Croce, and Ughetto 2021; Bonini et al. 2018b). Although BAs finance more businesses than venture capitalists (Mason, Botelho, and Harrison 2016) and angel groups take over investment ranges that used to be the prerogative of venture capital (Mason, Botelho, and Harrison 2019), their effect remains comparatively unexplored (Harrison, Mason, and Robson 2010; White and Dumay 2017; Cowling, Brown, and Lee 2021; Butticè, Croce, and Ughetto 2021; Bonini et al. 2018b).

Using a unique dataset of 815 angel group member investments, including full access to individual members' investment returns, we empirically test whether BAs can benefit from cross-border investments and how syndication moderates the distance-performance relationship. More specifically, we first demonstrate an inverted U-shaped relationship between (geographic and cultural) distance and BA investment returns: initial increases in distance are associated with increased investment performance but excessive distance is linked to lower performance, resulting in an inverted U-shape relationship. Moreover, we develop network arguments that explain how investor syndication moderates this relationship in a way that stabilizes investment returns across distance: for proximate investments, syndication introduces similar diversity benefits as geographic and cultural distance; for distal investments, it mitigates transaction costs. As a result, high degrees of syndication flatten the inverted U-shape at consistently high levels of investment returns.

Our study makes a series of contributions. First, we contribute to the literature on the internationalization of early-stage venture finance (e.g., Harrison, Mason, and Robson 2010; Cowling, Brown, and Lee 2021) with a study that addresses calls to investigate distance in BA investment decisions (White and Dumay 2017) and the non-linearity of BA investment returns (e.g., Capizzi 2015; Antretter et al. 2020).

Second, we address calls to investigate the BA investment process (Mason, Botelho, and Harrison 2019) and show that BAs – usually considered solitary investors – can improve their investments by pooling resources in angel groups. This adds to the emerging literature on the role of knowledge sharing in angel groups (Antretter et al. 2019; Mitteness et al. 2016; Werth and Boeert 2013; White and Dumay 2017; Bonini et al. 2018b; Carpentier and Suret 2015).

Third, we add network arguments to transaction cost theory (Williamson 1975, 1985), which often discusses transaction costs in an isolated manner (Cumming and Zhang 2019; Antretter et al. 2020) that makes them seem inevitable (Madanoglu, Memili, and De Massis 2020). Our study illustrates how network resources mitigate distance-related transaction costs: investor collaboration brings the benefits of distant investments into reach while avoiding its costs.

Background and hypotheses

Transaction cost theory builds on bounded rationality to highlight that transactions are inherently costly (Williamson 1985, 1975). Transactions feature three main types of costs: costs of searching and processing information, costs of negotiating contracts, and costs of monitoring and enforcement (Bowen and Jones 1986). Distance between stakeholders generally increases these costs because it reduces understanding of tacit knowledge (Madanoglu, Memili, and De Massis 2020), trust (Hain, Johan, and Wang 2016; Shane 1992), active collaboration (Hofstede 2001; Ouchi 1980), and monitoring ability (Cumming and Johan 2007; Coval and Moskowitz 2001). These frictions make distant investments less attractive for many investors (Lutz et al. 2013; Beugelsdijk et al. 2018). Hain, Johan, and Wang (2016) find that the higher geographical and cultural distance between investor and investee, the lower the likelihood of cross-border transactions. As a result, investors show a general preference for local investment opportunities, a behavior called local bias or home bias (Coval and Moskowitz 1999), which exists in a variety of fields from venture capital (e.g., Cumming and Dai 2010; Jääskeläinen and Maula 2014; Lutz et al. 2013; Hain, Johan, and Wang 2016) to crowdfunding (Lin and Viswanathan 2016; Guenther, Johan, and Schweizer 2018).

The same logic applies to BAs, who demonstrate considerable local bias but have received far less scientific attention on this topic (Cumming and Dai 2010; Jääskeläinen and Maula 2014; Lin and Viswanathan 2016; Blohm et al. 2020). As with professional investors, distance in BA investments increases transaction costs related to obtaining tangible information (Guenther, Johan, and Schweizer 2018), identifying good deals (Cumming and Zhang 2019; Antretter et al. 2020), and adding value through monitoring and mentoring (Politis 2008). However, there are also less frequently discussed effects of distance that are associated with benefits (e.g., Lin and Viswanathan 2016; Blohm et al. 2020). For instance, distance between investor and company reduces network overlaps, creating a broader overall network of potentially useful social ties (Elfring and Hulsink 2003; Granovetter 1973). Similarly, distant investors can contribute useful outside perspectives to business practices (Hong and Page 2001).

We argue that these benefits materialize at lower levels of distance than most transaction costs and that, as distance increases further, additional benefits of distance become fewer while transaction costs keep increasing. As a result, we expect initial increases in (geographic and cultural) distance to be associated with increases in investment performance up to a turning point, beyond which additional distance is associated with lower performance. The following section theorizes about the specific latent benefits and costs of geographic and cultural distance.

Benefits and costs of geographic distance on BA investment returns

Initial increases in distance between BA and the company can create a series of benefits (Harrison, Mason, and Robson 2010; Sørheim 2003; Berchicci, Block, and Sandner 2011). First, distance between investor and investee reduces network overlaps, creating a broader collective network of social ties that are useful for business (Elfring and Hulsink 2003; Granovetter 1973). For instance, when a French venture intends to enter the German market, a German investor may have valuable new network ties that facilitate the expansion. Second, expanding one's horizon beyond local opportunities increases a BA's overall number of investment

opportunities. A broader set of options is especially important for BAs in hubs such as London, Berlin, and Zurich, where the abundance of investors makes opportunities very competitive (Wetzel 1983). Also considering distant opportunities sidesteps these highly competitive red oceans (Kim and Mauborgne 2004) in favor of better deals in less competitive regions (Fu and Sin Huei 2020; Harrison, Mason, and Robson 2010). Third, the broader geographic scope of investment opportunities increases the likelihood of BAs finding a company that fits their personal expertise, allowing them to add more value to their portfolio company (Politis 2008). In venture capital, this is associated with higher fund returns (Cressy, Malipiero, and Munari 2014) and more successful exits (Cumming, Knill, and Syvrud 2016).

However, if geographic distance becomes excessively large, transaction costs increase to the point where marginal performance effects turn negative. First, substantial geographic distance increases tend to come with additional border-related transaction costs (Forsgren 2016; Johanson and Vahlne 1977). While geographically proximate countries often collaborate (e.g., European Union, NAFTA, or ASEAN), geographically distant nations tend to create hurdles that can make investing more difficult (e.g., complex visa procedures or restrictions on regulation). Second, greater geographic distance increases transaction costs related to obtaining and processing market information (Alchian and Demsetz 1972). Time zones become less similar and traveling times excessively long, making collaboration with portfolio companies more challenging (Abbay, Rutten, and De Graaf 2018). While flying from the UK to France to meet an entrepreneur is only a minor inconvenience to many investors, flying from the UK to New Zealand takes time and planning. As a result, BAs are less able to check a venture's competence and motivation, putting the angel at a negotiating disadvantage (Shane 2005). Third, after an initial investment, very distant BAs are also less likely to contribute to the portfolio company. Network ties do not overlap much but are also less useful (Granovetter 1973). They tend to visit less often and even when they do, they contribute less relevant market knowledge (Politis 2008). A BA in the Seychelles is unlikely to benefit a London-based consumer product company in its preparations for international expansion.

This suggests that initial increases in geographic distance are associated with better performance but that increasing transaction costs take over at some point, leading to lower performance for investments at excessive geographical distance. We therefore propose an inverted U-shaped relationship between the geographic distance between BAs and their portfolio companies and the associated investment returns.

Hypothesis 1: The relationship between geographic distance and BA investment returns describes an inverted U-shape, such that increases in distance are associated with better investment returns up to a turning point beyond which further increases in distance are associated with lower investment returns.

Benefits and costs of cultural distance on BA investment returns

We propose that cultural distance also features early benefits and later costs. First, initial increases in cultural distance improve the quality of interactions because culturally distant BAs can contribute useful outside perspectives to business practices (Hong and Page 2001). BAs from different backgrounds may, for example, know novel business expansion

strategies or understand which stakeholders need to be convinced (Cumming, Knill, and Syvrud 2016). Cultural diversity on the investor panel can thereby prevent mistakes and increase productivity (Ottaviano and Peri 2006). Second, ventures might also benefit from a halo effect that comes from securing culturally diverse investors. For instance, a diverse board can signal legitimacy, which is crucial for early-stage ventures (Colombo 2021).

However, while some cultural distance may be good, being too far removed is likely to cause harm (Forsgren 2016; Beugelsdijk and Mudambi 2014). First, culturally distant investments are associated with substantial transaction costs related to searching and processing, and increased emotional conflicts between business partners that harm collaboration (Chattopadhyay et al. 2020). Second, culturally distant ventures are also difficult to monitor (Jääskeläinen and Maula 2014), making it hard to engage in processes that are essential for business growth, such as learning and trust-building (Vahlne and Johanson 2017). Third, cultural differences reduce trust (Shane 1992). In combination with a lack of domestic knowledge and contacts, this makes due diligence processes challenging (Mingo, Morales, and Alfonso Dau 2018; Khurshed et al. 2020). The same applies to negotiating deals: although Canada and Mexico are both geographical neighbors of the United States, American BAs may be more at ease negotiating deals in Canada than in Mexico due to the greater cultural similarity. Fourth, increasing cultural distance reduces the beneficial halo effects: when investors become too foreign to be recognizable household names, they stop contributing to the legitimacy of the venture in a way that helps it succeed (Colombo 2021). A serial entrepreneur from the United Kingdom that makes BA investments may add more legitimacy to a German company than one from Indonesia.

Thus, initial increases in cultural distance are likely associated with higher investment returns, whereas excessive cultural distance may lead to lower investment returns.

Hypothesis 2: The relationship between cultural distance and BA investment returns describes an inverted U-shape, such that increases in distance are associated with better investment returns up to a turning point beyond which further increases in distance are associated with lower investment returns.

Syndication networks and angel group members' investment returns

Previous research has spent considerable attention on the link between syndication and investment returns in the contexts of venture capital (Brander, Amit, and Antweiler 2002; Khurshed et al. 2020; Wang and Wang 2012; De Clercq and Dimov 2004) and private equity (Mingo, Morales, and Alfonso Dau 2018). This kind of cross-border syndication has long been uncommon in BA investments (Butticè, Croce, and Ughetto 2021). BA investments were considered personal collaborations with illiquid information, making them a great deal more difficult to trade over great distances (Shane 1992; Hain, Johan, and Wang 2016). As a result, even online marketplaces for financial products often display home bias (Lin and Viswanathan 2016; Guenther, Johan, and Schweizer 2018). However, this is starting to change with the emergence of structured angel groups that facilitate the exchange of information and execution of deals. Compared to individual BAs, angel group members can benefit from

network effects that reduce the liability of foreignness of outsiders (Hymer 1976; Dai and Nahata 2016; Murzacheva and Levie 2020). We thus believe that syndication can improve international investment outcomes across both geographic and cultural distance.

Geographically proximate investments benefit from syndication because many benefits of distance can also be created by introducing more investors to the deal. For instance, geographical distance reduces competitive pressures for BAs in investment hubs. This can also be achieved by means of collaboration, where otherwise competing investors team up to improve their collective bargaining position with the company (Fu and Sin Huei 2020). In addition, syndication adds new network links, increasing the chances of having access to the right contact for any given task (Granovetter 1973). These links channel information about sector activities across firms, industries, and borders, creating "activity chains" (Andersson and Forsgren 2000, 332).

For *geographically removed investments*, syndication improves information search and processing (Bowen and Jones 1986; Williamson 1981), which reduces transaction costs (Liberti and Petersen 2019). BAs can observe the behavior of fellow investors who are more experienced in investing in the target country (Bonini, Capizzi, and Zocchi 2019b). Rather than individually completing due diligence processes for a distant company, angel group members can follow the lead of BAs who are geographically closer to the company (Johanson and Vahlne 2009; Bonini, Capizzi, and Zocchi 2019a). Similarly, angel group members can outsource deal monitoring of distant investments to more proximate syndicate members (Khurshed et al. 2020; Jensen and Meckling 1976; Bonini, Capizzi, and Zocchi 2019b). These syndicate structures allow BAs to focus on the parts of the business where they can add the most value (Dai and Nahata 2016).

Hypothesis 3: BA syndication moderates the relationship between geographic distance and investment returns such that the inverted U-shape becomes less pronounced under high levels of syndication.

Culturally proximate investments often lack outside perspectives for processes such as resource acquisition (Cumming and Dai 2010). This can be fixed by introducing diverse investors to the deal whose expertise helps generate new ideas that can help the venture (Bonini, Capizzi, and Zocchi 2019b). Syndication thereby allows BAs to multiply their resources and knowledge (Johanson and Vahlne 2009; Elfring and Hulsink 2003; Leppäaho, Chetty, and Dimitratos 2018).

For *culturally removed investments*, syndication introduces BAs who have a better cultural understanding of the local environment. This reduces transaction costs (Khavul and Deeds 2016; Butticè, Croce, and Ughetto 2021) and generates ideas on how to adapt products or services to specific markets (Leppäaho, Chetty, and Dimitratos 2018). Similarly, syndication helps in negotiations and deal management (Johanson and Vahlne 2009; Agndal and Chetty 2007): national differences in power distance (Hofstede 1980) and communication (Kogut and Singh 1988) can be a strain on investment relationships. Syndicates allow BAs to recruit investors from the company's local culture, facilitating a tacit understanding that is difficult for foreigners to imitate (Khurshed et al. 2020).

Hypothesis 4: BA syndication moderates the relationship between cultural distance and investment returns such that the inverted U-shape becomes less pronounced under high levels of syndication.

Data and methods

Studied angel group

We test our hypotheses on unique data from angel group members residing in Europe, USA, and the Middle East. Angel groups are ideal for testing our hypotheses because they provide investors with a standardized deal flow of international ventures (Croce, Tenca, and Ughetto 2017) and facilitate knowledge sharing and syndication among their members (Antretter et al. 2020; Bonini et al. 2018b). The BAs in our sample have jointly invested close to 30 million Euro and currently hold equity stakes in around 100 early-stage companies. In line with our confidentiality agreements with the angel network, investors remained anonymous throughout the research process. Companies that seek funding from the angel groups in our sample submit a host of information such as factsheets and pitch presentations via an online submission system. BAs decide independently whether to invest their own money in each venture they evaluate, but the initial steps (i.e., prescreening for overall investment criteria) are delegated to gatekeepers who conduct group management activities that are important to the functioning of the angel group itself (Wirtz et al. 2019).

We collected the following data for our study. First, we gathered the venture information provided to the BAs prior to making their investment decisions. This mainly consisted of consolidated deal factsheets and presentations with in-depth data about the ventures and their management teams. From these sources, we retrieved information such as the venture's primary office location, its business model, and prior capital the company had received. Second, the operators of the angel group provided us with full details of each investment (e.g., date of investment, amount invested, participating BAs, share price at investment date). This kind of investigation using actual angel investment return data is rare because these data are difficult to collect (Gregson, Bock, and Harrison 2017; Capizzi 2015) but it avoids the issues associated with self-reported financial data (see Franić and Drnovšek 2019; Harrison and Mason 2008). Finally, we also complemented our dataset with information on the local business culture (Hofstede Insights 2020) and market environment at the time of investment (World Bank 2020, 2021; OECD.Stat 2021).

Sample characteristics

Table 1 shows the main characteristics of the BAs and their cross-border deals in our sample. At the time of our study, the angel group had 680 investors who made at least one investment in the angel group. As our study is interested in the performance effect of cross-border investments, we excluded all 414 BAs that did not make any cross-border investments. The BAs in our sample did not differ significantly in terms of their personal characteristics or investment behavior from the overall sample. For example, both groups

made an average of 7 investments, the average age in our sample was 48 years while that of the excluded BAs was 49 years, and their national distribution was very similar. All investments were made between 2009 and 2020.

Of the 266 BAs who made cross-border investments within our study period, 52.63% were male and 47.37% were female. The average investor age in our sample was 47.26 years. On average, 62.65% of their portfolio investments were made outside the BAs' countries of residence. Of those cross-border investments, 20.43% were made in adjacent countries, 55.05% within intermediate distance (e.g., Italy to Belgium), and 24.52% of investments were made overseas (e.g., United Kingdom to United States). Overall, the characteristics of BAs in our sample are comparable to those used in other studies of angel groups. For instance, Bonini et al. (2018a) report an average age of 48 years, which is identical to our sample, and Croce, Tenca, and Ughetto (2017) report an average age of 55 years. Similarly, the mean portfolio size of our sample BAs was 6.57 companies, which is in line with prior research (e.g., 6.36 companies in Bonini et al. 2018a, 6.23 in Gregson, Mann, and Harrison 2013).

Our unit of analysis is the dyad comprising the investor and the company. We excluded all non-equity investments (e.g., loans) to ensure that we had comparable data for all investments in our dataset. Moreover, we excluded all follow-on rounds to focus on

Table 1. Descriptive Statistics of BAs in Our Data (average 2009–2020).

Variable	Value
Personal characteristics	
Age	47.26
Gender	52.63% male
Country of residence	
Switzerland	24.81%
France	12.41%
Belgium	9.77%
Germany	6.02%
US	5.64%
UK	5.64%
Other	35.71%
Share of portfolio investments	
Investments in country of residence	37.35%
Investment in neighboring country	12.80%
Investment in not neighboring countries on the same continent	34.49%
Investment overseas	15.36%
Deal characteristics	
Deal size	€375,932.57
No. co-investors	30.14
Investment location	
Switzerland	46.67%
France	13.33%
UK	11.11%
US	6.67%
Other	22.22%
Stage of development	
Seed	77.78%
Start-up	13.33%
Expansion	4.44%
Late	4.44%
Industries	
Technology	38.10%
Healthcare	26.19%
ICT	19.05%
Consumer	16.67%

principal investment decisions rather than later capital injections of existing investors. This resulted in a sample of 836 cross-border investments. Of this sample, 21 investments had to be excluded due to missing data, which resulted in a final sample of 815 cross-border investments for model estimation. These 815 investments were made by BAs in angel groups from 34 different countries. 77.78% of principal investments were made in seed-stage companies and the main industries were High Technology (38.10%), Healthcare (26.19%), and ICT (19.05%). The average deal size (i.e., total capital invested by all BAs in the focal round) was €375,932.57 (average in Europe: €200,600; EBAN, 2019), with an average of 30.14 investors syndicating for each investment. BAs invested, on average, €6,020 in neighboring countries, €4,866 in farther removed companies on the same continent, and €7,907 in overseas companies.

Measures

Investment performance

We measure investment performance as the *internal rate of return* (IRR). IRR is one of the standard performance measures in BA research (Antretter et al. 2020; Blohm et al. 2020; Capizzi 2015; Mason and Harrison 2002; Gregson, Bock, and Harrison 2017) and has also been used extensively by studies in the field of venture capital and private equity (Buchner et al. 2018; Hochberg, Ljungqvist, and Lu 2007; Kaplan and Schoar 2005; Mason and Harrison 2002).

We followed Mason and Harrison (2002) and calculated IRRs based on the Net Asset Values (NAVs) of each BA investment while considering both positive and negative returns as well as the holding period over which valuation changes occurred (see 1; for a similar approach, see Blohm et al. 2020; Capizzi 2015). We derived the NAVs at two points in time (i.e., the purchase date and at the end of our study period) from the groups' deal administration system. The groups' gatekeepers calculate NAVs based on the investment agreements, capitalization table, audited financial statements, or company announcements. All valuations are prepared in line with *International Private Equity and Venture Capital Valuation Guidelines* (IPEV 2018) to ensure the valuation approach is comparable across all portfolio companies. We determined the holding period in years between these time points to calculate annualized IRR:

$$0 = \sum_{n=0}^{N} \frac{CF_n}{(1 + IRR)^n} = CF_0 + \frac{CF_N}{(1 + IRR)^N} \quad (1)$$

CF_0 = *Share price at the initial investment*
CF_n = *Share price at period n*
CF_N = *Final share price*
N = *Holding period (years between initial investment and final evaluation)*
n = *Period*
IRR = *Internal rate of return*

Following Mason and Harrison (2002), we did not account for any income from dividends or fees (e.g., for taking board positions) that the BAs may have received. To reduce the model's sensitivity to outliers, we winsorized the investment performance at the 1% level

(Buchner et al. 2018; Hochberg, Ljungqvist, and Lu 2007). Non-winsorized results and those of other cut-off points (2% and 5%) match the ones of the main analysis and are reported in the additional analyses.

Geographic distance

For our measure of geographic distance, we followed previous research (e.g., Dai, Jo, and Kassicieh 2012; Jääskeläinen and Maula 2014; Mingo, Morales, and Alfonso Dau 2018) and calculated the geographic distance (in kilometers) between the two national capitals of the countries in which the BAs and their portfolio ventures are located and converted these values to their natural logarithm.

Cultural distance

We operationalized cultural distance with Hofstede's (1980) measure of cultural distance in line with prior research (e.g., Jääskeläinen and Maula 2014; Dai and Nahata 2016; Guenther, Johan, and Schweizer 2018). First, we collected culture scores along Hofstede's main dimensions: power distance, uncertainty avoidance, individualism, and masculinity (Hofstede Insights 2020; Hofstede 1980). We calculated the cultural distance between the BAs and their investment companies by using the Kogut and Singh Index, which is the most commonly used Cartesian distance measure for cultural distance (Kogut and Singh 1988; Shenkar et al. 2020; Maseland, Dow, and Steel 2018; Dai and Nahata 2016):

$$Cultural\ Distance = \frac{\left(\sum_i^4 \left(H_{BAi} - H_{Compi}\right)^2\right)^{\frac{1}{2}}}{4} \tag{2}$$

Here, H_{BAi} is the Hofstede measure of the BA's country on cultural dimension *i* and H_{BAi} is the Hofstede measure of the company's country on cultural dimension *i*. The most culturally proximate dyad in our sample is the UK–US, while the most culturally distant dyad is Denmark–Russia.

Syndication. In line with previous research, we defined syndication as the absolute number of BAs that co-invest in a deal (Lerner 1994; Gregson, Mann, and Harrison 2013; Bacon-Gerasymenko, Arthurs, and Cho 2020).

Control variables

On the investor level, we controlled for the BAs' *portfolio volume* by measuring the absolute amount of Euro invested since joining the angel investment platform as well as the total *number of investments* made via the platform (Antretter et al. 2020; Buchner, Mohamed, and Schwienbacher 2017). In addition, we included each *investor's age* as a proxy for accumulated knowledge prior to joining the community because BAs' knowledge not only results from their involvement within the angel group but also from their previous experience (Greenwood and Nagel 2009).

On the venture level, we controlled for *deal size* to account for the fact that for distant companies, large investment opportunities tend to be more interesting to venture investors (Lutz et al. 2013). Moreover, we controlled for *previous capital* that the company

raised to control for the stage of the deal. This information came from the companies' shareholders and investment agreements. In addition, we control for industry and investment year-specific effects by including *industry* and *investment year* controls in all our estimations. For our industry control, we determined the industries of the BAs' portfolio companies as some industries may tend to raise more funding (also see Antretter et al. 2020; Matusik and Fitza 2012; Yang and Aldrich 2014). Further, we accounted for each venture's *business model* by introducing a dummy variable that takes the value of 1 if the venture operated with a business-to-business (B2B) model and 0 if it operated with a business-to-consumer (B2C) model. For our country-level controls, prior research suggests that well-developed capital markets increase a venture's chances of a successful exit (Black and Gilson 1998; Khurshed et al. 2020). We therefore follow Khurshed et al. (2020) and controlled for the *stock market development* of each venture's country, measured as the stock market capitalization divided by the country's gross domestic product (World Bank 2020). Further, a national abundance of startup capital affects fundraising and investment behavior (Gompers et al. 1998), so we controlled for the relative development of the entrepreneurial finance market in the form of nationwide seed-stage investments, divided by the country's gross domestic product (OECD.Stat 2021). We also controlled for each investment country's national Strength of Legal Rights Index Score (World Bank 2021) because better contract enforceability is associated with higher international lending and foreign direct investments (Nana 2014).

Results

Table 2 presents the descriptive statistics for all model variables including the mean, median, standard deviation, and minimum and maximum values. Five of the ventures in the sample were complete write-offs during the observation period. This puts the overall median investment IRR at 0.26%, which is similar to the values of, for example, Capizzi (2015) who reports an average IRR of 1.80%. If we exclude negative returns, then our sample shows mean IRR of 15.87%, which is also similar to the 17.6% reported in Capizzi (2015). The mean geographic distance is 2,369 km and the mean cultural distance is 1.60 units (Kogut and Singh 1988).

Main analysis

We used ordinary least squares (OLS) regression to test our hypotheses. An inspection of the variance inflation factors (VIFs) showed that multicollinearity is not an issue in our study. All VIFs of all independent variables in all models are below the acceptable limit of 5 (O'Brien 2007). Thus, we can conclude that multicollinearity did not influence our results.

For the subsequent analysis, we standardized all variables. Table 3 reports the regression results. As a baseline, Model 1 includes only the control variables. Interestingly, it shows that for instance, *previous capital* has a significant negative association with investment performance. This might be because large amounts of previous capital raise valuations, thereby making new investments in the company more expensive. The dynamic period of value creation may already be over for ventures that have previously raised a larger amount of capital so that new investors enter the investment with a lower risk and lower return profile.

Table 2. Correlation table.

No.	Variable	Mean	Median	SD	Min	Max	1	2	3	4	5	6	7	8	9	10	11
1.	Internal rate of return	−0.039	0.003	0.287	−1.000	0.380											
2.	Geographic distance (km)[a]	7.143	7.045	1.059	5.158	9.843	0.014										
3.	Cultural distance	1.600	1.637	1.187	0.016	6.046	0.143	0.048									
4.	Portfolio volume (€)	65,356	9,544	149,951	500	1.858 m	−0.175	0.079	−0.05								
5.	No. of portfolio companies	6.567	5	5.678	1	44	−0.064	0.042	−0.010	0.641							
6.	Investor age	47.804	48	9.079	20	73	−0.099	−0.019	−0.145	0.198	0.208						
7.	Deal size (€)	523,626	157,738	851.378	10,640	3,285 m	0.162	−0.126	−0.023	−0.005	−0.131	−0.025					
8.	Previous capital (€)	4.359k	2.450	7,974k	100k	52 m	−0.058	−0.032	0.018	−0.016	−0.079	−0.006	0.026				
9.	Stock market development	1.190	0.897	0.688	0.300	2.480	0.123	−0.122	0.019	−0.017	−0.117	−0.032	0.604	0.297			
10.	Investment year	2014	2015	2.526	2009	2020	0.215	0.055	0.027	−0.079	0.079	−0.087	−0.410	−0.186	−0.561		
11.	Early stage funding	272.527 m	97.235 m	1.135 m	7.531 m	6,519 m	0.205	0.176	0.013	0.028	−0.043	−0.033	0.379	0.186	0.679	−0.277	
12.	Strength of legal rights index	6.642	6	1.570	4	12	0.156	0.445	0.055	0.081	0.034	−0.035	−0.187	−0.135	−0.154	0.221	0.316

$n = 815$ observations from 266 BAs investing in 42 companies. Descriptive statistics present the averages across all observation periods. All mean and median values on the company and investor level are reported on their respective level of analysis. [a]Indicates natural logarithm. All absolute values larger than or equal to |0.079| are significant at the 5% level.

In Table 3, Models 2, 3, 5, and 6 evaluate Hypothesis 1 and 2, which propose an inverted U-shaped relationship between both geographic and cultural distance and investment performance. The results from Models 2 and 3 confirm that the relationship between geographic distance and investment performance is indeed nonlinear and inverted U-shaped (Model 3: $\beta = -0.078$; $p = 0.000$). Model 3 explains 41% of the variance of IRR in our sample of cross-border investments and is a significant improvement over Model 2 (Δ Adj. $R^2 = 0.071$, LR $\chi^2 = 93.72$, $p = 0.000$). Decreasing geographic distance by one standard deviation (represented by a dyad with approximately the distance between

Table 3. Regression table.

	Geographic Distance Models				Cultural Distance Models			
Deal-Level Performance (IRR)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Number of portfolio companies	0.02*	0.02*	0.02*	0.02*	0.02*	0.02	0.01	0.01
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Investor age	−0.01	−0.01	−0.00	0.00	−0.00	−0.00	−0.00	0.00
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Portfolio volume	−0.05***	−0.05***	−0.05***	−0.03**	−0.05***	−0.05***	−0.02	−0.03**
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Deal size	0.13***	0.14***	0.13***	0.11***	0.14***	0.14***	0.14***	0.12***
	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]
Previous capital	−0.02*	−0.02**	−0.02*	−0.01	−0.02*	−0.02**	−0.01	−0.01
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Business model	−0.26***	−0.26***	−0.25***	−0.23***	−0.26***	−0.26***	−0.29***	−0.24***
	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]	[0.03]
Stock market development	−0.04*	−0.03*	−0.01	−0.01	−0.04**	−0.04*	−0.05***	−0.01
	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]	[0.02]
Early stage funding/GDP	0.04***	0.03**	−0.01	−0.02	0.04***	0.03**	0.04***	−0.03**
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.02]	[0.01]
Strength of legal rights index	−0.00	−0.01	0.03***	0.02**	−0.00	−0.00	−0.01	0.03***
	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]	[0.01]
Investment year control	0.13***	0.14***	0.12***	0.13***	0.14***	0.14***	0.19***	0.13***
	[0.02]	[0.02]	[0.01]	[0.02]	[0.02]	[0.02]	[0.16]	[0.02]
Geographic distance[a]		0.02*	0.05***	0.07***				0.07***
		[0.01]	[0.01]	[0.01]				[0.01]
Geographic distance[a] squared			−0.08***	−0.07***				−0.07***
			[0.01]	[0.01]				[0.01]
Syndication				0.00			0.09***	−0.01
				[0.01]			[0.01]	[0.02]
Geographic distance[a] x Syndication				−0.04***				−0.04***
				[0.01]				[0.01]
Geographic distance[a] squared x Syndication				0.05***				0.05***
				[0.01]				[0.01]
Cultural distance					0.03***	0.05***	0.05***	0.04***
					[0.01]	[0.02]	[0.01]	[0.01]
Cultural distance squared						−0.01**	−0.01**	−0.02***
						[0.01]	[0.01]	[0.01]
Cultural distance x Syndication							−0.05***	−0.04***
							[0.02]	[0.01]
Cultural distance squared x Syndication							0.02**	0.02***
							[0.01]	[0.01]
Industry control	Included	Included	Included	Included	Included	Included	Included	Included
LR χ^2		3.48*	93.72***	67.20***	8.73***	4.26**	81.85***	87.24***
AIC	−39.79	−41.28	−132.99	−194.20	−46.52	−48.78	−124.63	−203.86
Adj. R^2	0.33	0.34	0.41	0.45	0.33	0.34	0.40	0.46
Num. obs.	815	815	815	815	815	815	815	815

Regression coefficients are standardized. * indicates $p < .1$, **indicates $p < .05$, ***indicates $p < .01$. Standard errors are shown in square brackets []. All two-tailed tests. [a] Indicates natural logarithm. Independent variable is winsorized at the 2nd and 98th percentiles to reduce the effect of extreme values.

Switzerland and the United Kingdom) reduces the IRR by 6.26% percentage points, while increasing geographic distance by one standard deviation from the inflection point (represented by a dyad with approximately the distance between France and the United States) reduces the IRR by 6.25% percentage points. Our models for cultural distance show similar results. Models 5 and 6 confirm that there is a nonlinear (inverted U-shaped) relationship between cultural distance and investment performance (Model 6: $\beta = -0.014$, $p = 0.041$). Model 6 explains 34% of the variance of IRR and is a significant improvement over Model 5 (Δ Adj. $R^2 = 0.003$, LR $\chi^2 = 4.26$, $p = 0.039$). This model also has a strong effect: the highest performance effect applies to investment dyads with roughly the cultural distance between Switzerland and France. It is 1.80% percentage points higher than that of deals with one standard deviation less (e.g., Switzerland to Germany) and 1.78% percentage points higher than that of dyads with one standard deviation more cultural distance (e.g., Switzerland to the United Arab Emirates).

To illustrate the nature of the main relationship between both geographic and cultural distance to investment performance, we plot the relationship in Figures 1 and 2 at the full range of their values. The plots show that the marginal performance effect for both distance measures first increases and then decreases after a certain threshold. This threshold is 1,735 km for geographic distance and 3.18 standard units of cultural distance (Kogut and Singh 1988; Hofstede Insights 2020). In addition to our results, these plots visually reveal an inverted U-shaped relationship between geographic and cultural distance and investment performance. We followed the procedures suggested by Haans, Pieters, and He (2016) to confirm the validity of these inverted U-shapes: (1) linear and squared distance terms are in the same model; (2) the β-coefficients of the squared terms are, as appropriate for inverted U-shapes, negative and significant (geographic distance: $\beta = -0.08$; $p = 0.000$; cultural distance: $\beta = -0.01$; $p = 0.041$); (3) the slopes on both ends of the graph are steep (see Figures 1–3; geographic distance left side: 0.338 & left side: −0.352; cultural distance left side: 0.074 & left side: −0.067); (4) the turning points are well within the range of the data (geographic distance: range −1.827 to 2.473, turning point at 0.173; cultural distance: range −0.804 to 4.096, turning point at 1.796); and (5) neither U-shaped variable has a statistically significant cubic effect (geographic distance cubed: $\beta = -0.000$; $p = 0.973$; cultural distance cubed: $\beta = 0.012$; $p = 0.065$). This supports both Hypothesis 1 and 2.

Hypothesis 3 and 4 predict that the relationships between distance (geographic distance in Hypothesis 3; cultural distance in Hypothesis 4) and investment returns are moderated by syndication. Hypothesis 3 and 4 are evaluated in Models 4 and 7, respectively, by entering the interaction term of geographic (cultural) distance and syndication as well as the interaction of the squared term of geographic (cultural) distance and syndication. The interaction in Model 4, which investigates geographic distance, is positive and significant ($\beta = 0.048$, $p = 0.000$). It explains 45% of the variance and is a significant improvement over Model 3 (Δ Adj. $R^2 = 0.045$, LR $\chi^2 = 67.20$, $p = 0.000$). Model 7, looking at cultural distance, is also significant ($\beta = 0.015$, $p = 0.019$). It explains 40% of the variance and is a significant improvement over Model 6 (Δ Adj. $R^2 = 0.063$, LR $\chi^2 = 81.85$, $p = 0.000$).

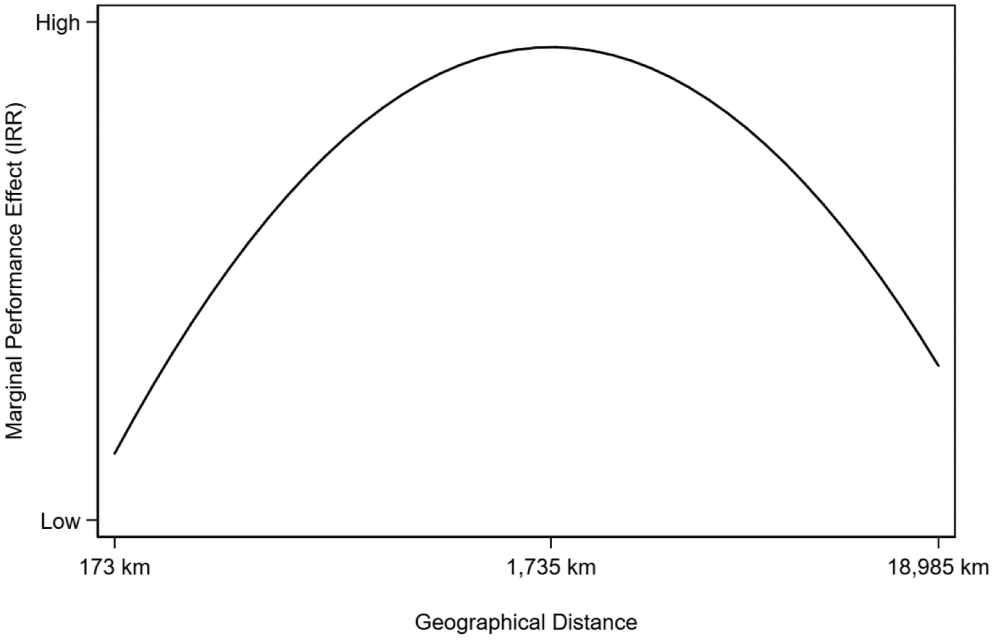

Figure 1. Geographic distance and performance.

Figures 3 and 4 illustrate the plotted marginal effects of the interaction between geographic distance and investment performance. Inspired by Matusik and Fitza (2012), we plot the marginal effects at low (mean minus one standard deviation), medium (mean), and high (mean plus one standard deviation) levels of geographic and cultural distance. As the number of co-investors increases, the inverted U-shaped relationship between distance and investment performance becomes less pronounced for both distance measures. For angel groups with few co-investors, the relationship between geographic and cultural distance and investment performance mirrors that in our main effect hypothesis. These results provide support for Hypothesis 3 and 4 . Model 8 includes all variables in the same model, combining the models for geographic distance and cultural distance. All relevant relationships remain significant: geographic inverted U-shape ($\beta = -0.072$, $p = 0.000$); cultural inverted U-shape ($\beta = -0.021$, $p = 0.001$); and moderation of geographic inverted U-shape ($\beta = 0.049$, $p = 0.000$); moderation of cultural inverted U-shape ($\beta = 0.021$, $p = 0.002$). This shows that our modeling is not only robust but also captures unique variance between geographic and cultural distance. The two measures' low correlation (0.048) also supports this.

Additional analyses

Sensitivity of outliers

To test the model's sensitivity to outliers, we followed recent methods recommendations (Meyer, Van Witteloostuijn, and Beugelsdijk 2017) and winsorized the dependent variable at different levels (Buchner et al. 2018; Hochberg, Ljungqvist, and Lu 2007). The results are

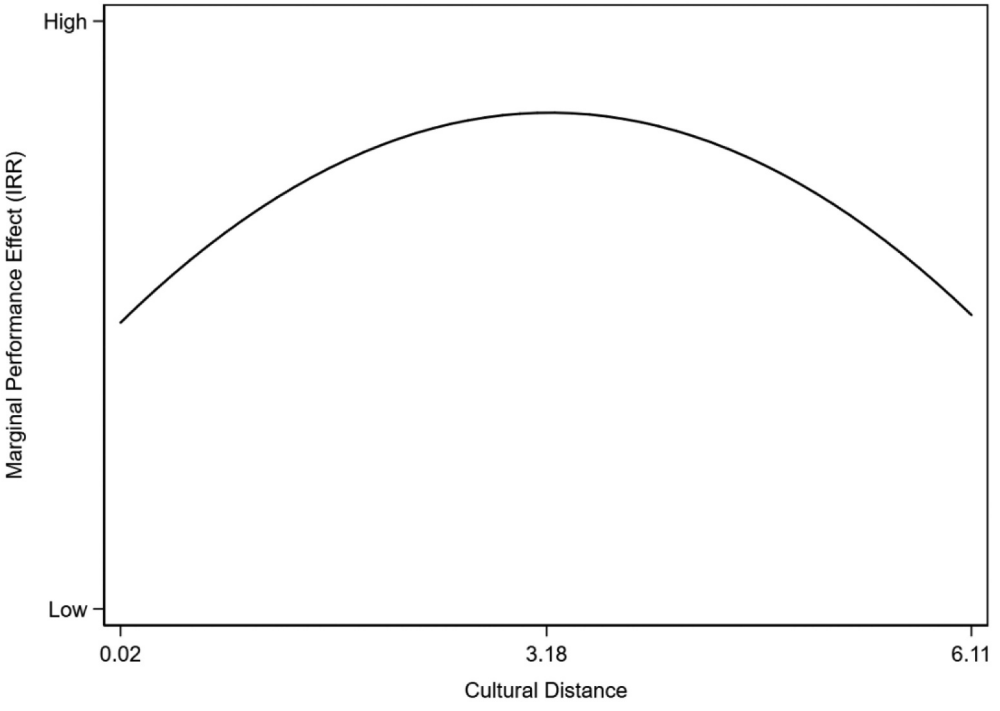

Figure 2. Cultural distance and performance.

robust to all common winsorization cutoffs. For instance, winsorizing the dependent variable at the 5th and 95th levels leads to the following results: Hypothesis 1 supported: $\beta = -0.07$, $p = 0.000$; Hypothesis 2 supported: $\beta = -0.02$, $p = 0.001$; Hypothesis 3 supported: $\beta = 0.05$, $p = 0.000$; and Hypothesis 4 supported: $\beta = 0.02$, $p = 0.001$. Winsorizing the model at the 2nd and 98th levels produces almost identical results: Hypothesis 1 supported: $\beta = -0.07$, $p = 0.000$; Hypothesis 2 supported: $\beta = -0.02$, $p = 0.001$; Hypothesis 3 supported: $\beta = 0.05$, $p = 0.000$; and Hypothesis 4 supported: $\beta = 0.02$, $p = 0.002$. Testing our hypotheses with the non-winsorized dependent variable also confirms all results of our primary hypothesis testing (Hypothesis 1 supported: $\beta = -0.09$, $p = 0.000$; Hypothesis 2 supported: $\beta = -0.02$, $p = 0.014$; Hypothesis 3 supported: $\beta = 0.07$, $p = 0.000$; and Hypothesis 4 supported: $\beta = 0.02$, $p = 0.029$).

Distance measures

Following previous research, we defined geographic distance as the geodesic distance between the capital cities of two nations (Dai, Jo, and Kassicieh 2012; Jääskeläinen and Maula 2014; Mingo, Morales, and Alfonso Dau 2018). However, geographic distance can also be operationalized with many other approaches, for example ones that rely on the exact company addresses and BA addresses, such as registered investment center, country of residence, and their passport country. To make sure that our analysis does not depend on our capital-to-capital operationalization, we ran our complete model using the distance between the actual office addresses of the companies with each of the locations listed for

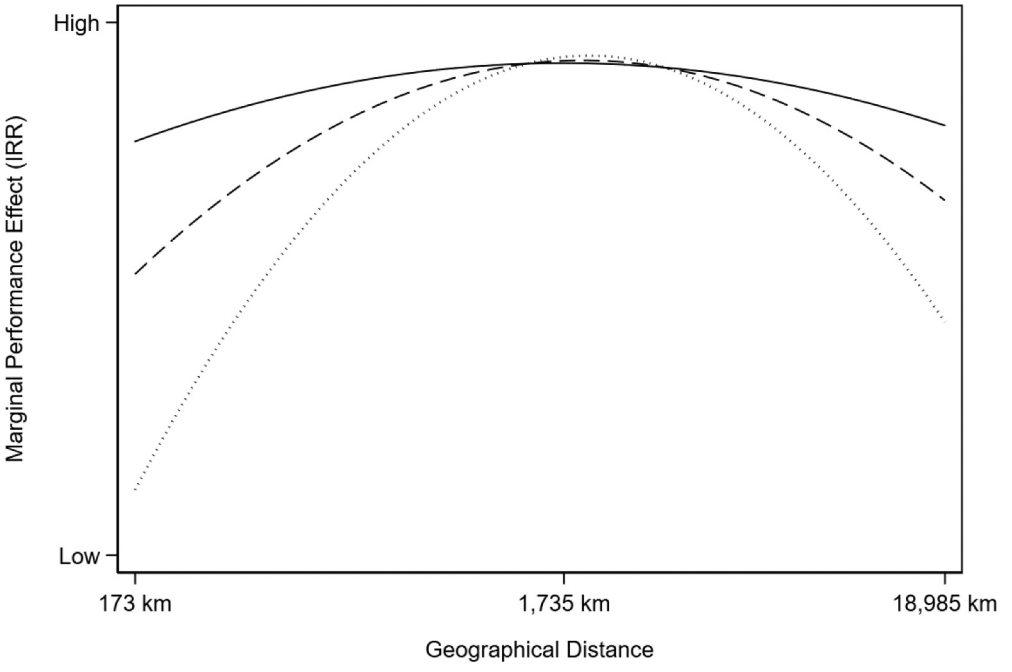

Figure 3. Cultural distance and performance under different levels of syndication.

the BA. This analysis produced the same results as our main analysis; BA registered investment center to company address ($\beta = -0.068$, $p = 0.027$); BA country of residence to company address ($\beta = -0.19$, $p = 0.003$); BA passport country to company address ($\beta = -0.21$, $p = 0.000$).

Performance measure

Although IRR is a robust measure of investment performance that is used regularly to study BA returns (e.g., Antretter et al. 2020; Blohm et al. 2020; Capizzi 2015; Mason and Harrison 2002), it has also been criticized because BAs do not invest by means of a dedicated fund; rather, they consider investment performance in terms of capital gains on each investment (Mason and Harrison 2002). Therefore, we tested the model with a capital gains multiple (CGM) on a deal-by-deal basis, computed as the ratio of the share price at the end of our study period to the share price on the investment date. Running the analysis with CGM as the dependent variable leads to the same conclusions for all our hypotheses.

Level of analysis

We argue that BAs use the resources of other angel group members in syndicated deals, which makes the deal level the appropriate level of analysis. However, one might argue that BAs—especially more experienced ones—may not draw as much on others' resources but focus on using existing resources from their investment portfolio (Antretter et al. 2020; Matusik and Fitza 2012). If this is true, then the investment portfolio would be the more appropriate level of analysis. To account for this possibility, we reran our main model at the portfolio level as an additional analysis with *portfolio IRR* as dependent variable (for

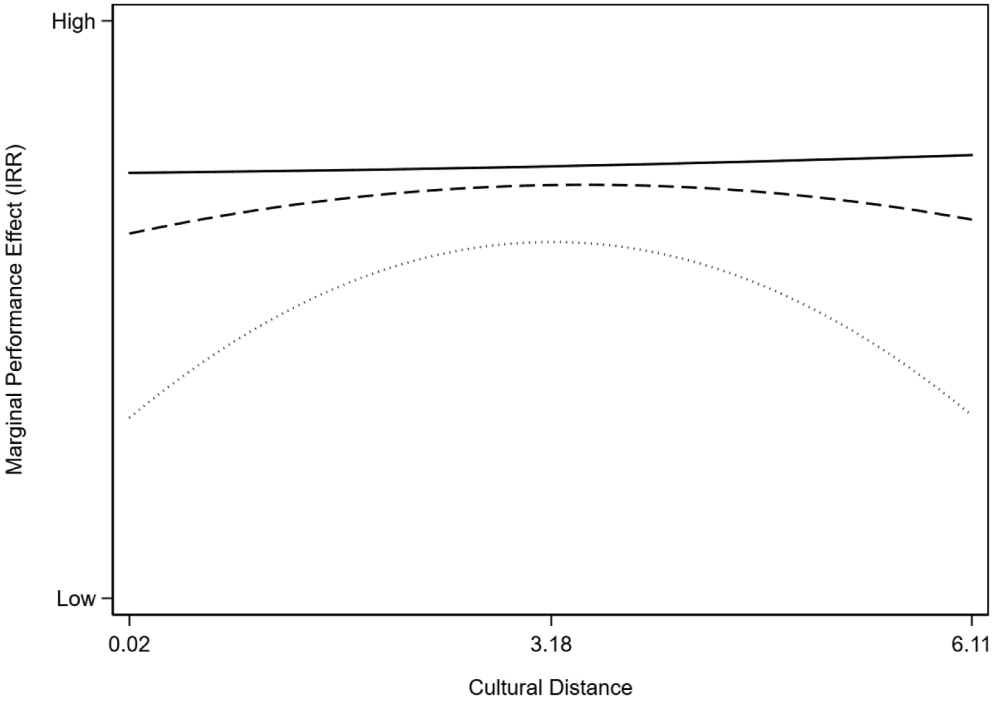

Figure 4. Geographic distance and performance under different levels of syndication.

a similar approach, see Antretter et al. 2020). As some of our control variables in our main analysis are deal-specific, we attempted to replicate them at the portfolio level. As such, our distance measures are computed as the average of the individual distances of each portfolio investment. Further, we control for the previous capital by including the average previous capital of the portfolio; we also control for the industry differences in IRR by including a set of dummies for the average industry (Antretter et al. 2020; Matusik and Fitza 2012) in which each BA invested; likewise, we account for the business model by including the average business model in the portfolio (using the prior 1 for B2C and 0 for B2B). We further control for investment conditions by including the mean stock market development, the mean investment year, the mean development of the early stage venture finance market, and the average strength of legal rights index. All analyses were run on the sample of 266 BAs. The results on the portfolio level match those from the main analysis on the deal level in that both relationships between geographic and cultural distance and investment performance show an inverted U-shaped relationship (Model 3: $\beta = -0.14$, $p = 0.000$; Model 6: $\beta = -0.10$, $p = 0.000$). In addition, both relationships are moderated by BA syndication (Model 4: $\beta = 0.06$, $p = 0.000$; Model 7: $\beta = 0.04$, $p = 0.035$). This supports our model.

Discussion

Using transaction cost theory, diversity arguments, and the network literature, this paper investigates how the performance of international BA investments depends on the interplay between (geographic and cultural) distance and syndication.

First, we asked how geographic and cultural distance affects BA investment performance. Using transaction cost theory and diversity arguments, we address the relatively new topic of internationalization in angel investments, a domain that has only just started to move beyond local investments (White and Dumay 2017). More specifically, we argue that international angel group investments cause complex distance effects that can be theoretically isolated into two latent forces: (1) diversity-related benefits that enhance BA investment performance, such as more non-overlapping knowledge, and (2) transaction cost-related issues that harm investment performance such as reduced mentoring activity. The combined effect of these positive and negative latent forces suggests that the relationship between (geographic and cultural) distance and BA investment returns resembles an inverted U-shaped relationship (Haans, Pieters, and He 2016). Our empirical analysis supports our hypothesis: benefits and costs of distance materialize at different points such that the association between distance and internal rate of return describes an inverted U-shape. Nonlinear theorizing is still relatively uncommon in BA research, which makes this study a foundational pillar for the nonlinear analysis of BA returns (Capizzi 2015; Antretter et al. 2020).

The second question asked how these transaction cost and diversity arguments hold up under increased collaboration between angel group members. Here, we built on the network literature to suggest that syndication moderates the relationship between distance and investment returns. Many of the beneficial effects of distance are related to interpersonal exchange, which can also be achieved by a broader interpersonal network (Granovetter 1973). Furthermore, many of the distance-related transaction costs can be mitigated by social exchange (e.g., Bonini, Capizzi, and Zocchi 2019a). Our results support these hypotheses. For low-syndication deals, the (geographic and cultural) distance–performance relationships describe an inverted U-shape; for high-syndication deals, the slopes of the inverted U-shaped relationship are much less pronounced and investment performance is consistently high across all distances. This suggests that syndication can substitute many of the distance-related benefits and alleviate distance-related transaction costs.

Theoretical contributions

Our study has implications for several areas of theory and BA research. First, we contribute to the literature on the internationalization of BA investments (Harrison 2017; Liu 2015). While extant research generally assumes that BA investments are made locally, recent studies suggest that distant investments may be much more common than assumed (Cowling, Brown, and Lee 2021). This adds urgency to the call to investigate the impact of distance on BA investment decisions (White and Dumay 2017). We add nuance to this discussion by considering both benefits and costs of distance in a conversation that is dominated by the discussion of transaction costs (e.g., Lin and Viswanathan 2016; Blohm et al. 2020). Moreover, our work uses latent force arguments to explain why benefits of internationalization are not limitless: after a certain threshold, incremental costs outweigh incremental benefits so that additional distance reduces investment returns, giving our study a novel nonlinear perspective (for other examples, see Capizzi 2015; Butticè, Croce, and Ughetto 2021). Further, we draw a theoretical distinction between geographic and cultural distance, explicating their separate effects on investments. Our findings confirm that this distinction is theoretically meaningful by showing that both types of distance

have similar effects but are largely uncorrelated. These results suggest that we should pay closer attention to the actual (geographic and cultural) distance of investment opportunities rather than simply considering whether they are in the same country as the investor.

Second, we contribute to the emerging field of BA syndication research. Syndication was long ignored in the BA literature – mostly due to the lack of data sources (Mason, Botelho, and Harrison 2016)—but is starting to gather momentum (see Antretter et al. 2019; Mitteness et al. 2016; Werth and Boeert 2013; Bonini et al. 2018b; Carpentier and Suret 2015). Our study contextualizes the effects of syndication by illustrating how their interaction with distance-related forces improves investments: syndicated deals are less sensitive to the downsides of internationalization (also see Chemmanur and Chen 2014; Politis 2008). While extant syndication research focuses on improved opportunity identification (Jääskeläinen and Maula 2014), we show how syndication can improve actual investments, contributing to the newly emerging literature on financial intermediation in BA investments (also see Bonini, Capizzi, and Zocchi 2019a; Butticè, Croce, and Ughetto 2021).

Third, we give back to transaction cost theory (Williamson 1975, 1985) by theorizing about conditionality of transaction costs in networks. Transaction costs research often discusses individual costs in an isolated manner (Cumming and Zhang 2019; Antretter et al. 2020), seeing new interfaces as nothing more than new places for things go wrong (think principal–agent problem). This has led to a focus on the justification of these costs rather than the study of their prevention or mitigation (Madanoglu, Memili, and De Massis 2020). Our analysis deviates from this approach and highlights how intermediation in BA syndicates can reduce transaction costs. Despite the more complex stakeholder structure in larger syndicates, overall processes run more smoothly. This suggests that transaction costs are deeply intertwined with network structures in international BA investments. Transaction costs of distant angel investments thus do not have to be accepted but can be mitigated with network resources; collaboration allows angel groups to reap the benefits of distant investments while avoiding most distance-related transaction costs.

Practical implications

This article also offers advice to practitioners. First, while cross-border BA investments are rapidly gaining popularity (Drover et al. 2017), they are often considered more risky than local investments (Cumming and Zhang 2019). Our results show that despite these perceived risks, international investments can actually benefit BAs. However, it also shows that in excessively distant cases, transaction costs quickly outweigh benefits. Nevertheless, we also offer a solution to this problem in the form of syndication: co-investing in angel groups mitigates costs of excessive distance because syndicate members bridge the gap between the portfolio companies and fellow investors. This contributes nuance to the literature on the benefits and costs of BA networks (Zu Knyphausen-Aufseß and Westphal 2008; Christensen 2011).

Second, our insights are useful to the leaders of angel groups (also see Paul and Whittam 2010). Operators should educate angel group members about the costs and benefits of cross-border transactions in early-stage investing and facilitate investments

among larger groups of BAs. This might raise the performance of both the BAs and ventures, improving the track record of the angel group and attracting new client companies and investors.

Limitations and future research

This study has certain limitations that point toward new directions for future research. First, a central assumption in our study is that BAs in syndicated deals actively use all network ties. Although this also applies to most of the venture investment literature (e.g., Bacon-Gerasymenko, Arthurs, and Cho 2020; Bonini et al. 2018a), it would be interesting to challenge this assumption in future research on how the benefits of deal syndicates depend on factors such as location, culture, and experience.

Second, we only used geographic and cultural distance, the two most common measures of distance. However, there might be other types of distance that may affect cross-border investment returns. For example, prior research has used economic distance (difference in real per capita GDP; Tsang and Yip 2007), psychic distance (subjectively perceived distance; Beckerman 1956), and lingual distance (indicating whether the countries share a common language; Hain, Johan, and Wang 2016) to investigate antecedents of investment success. These different types of distance often yield different results (Beugelsdijk et al. 2018). Furthermore, while our Hofstede measure of cultural distance is arguably a widely used measure of cultural differences, there are other measures that serve a similar purpose. For example, there has been substantial debate about the relative advantages of the Hofstede and the GLOBE measure (e.g., Tung and Verbeke 2010). As such, we encourage future studies to validate our results with other measures of distance.

Third, we only investigated investments that passed the initial screening process of the investment platform. This introduces potential constraints on generality as the purpose of pre-screening is to select for more promising opportunities; therefore, the sample cannot be expected to be representative for all investment opportunities. We recommend future research to investigate how venture quality and pre-screening affects the importance of BA networks and collaboration when considering cross-border investments.

Fourth, we only investigated investments from a relatively small number of countries. While the investigated countries represent many different cultures, many others are missing. Due to the central nature of culture to our argument, we hesitate to extrapolate our findings to cultures that are far removed from those in our study. We therefore hope that future research will test the validity of our findings in contexts that are underrepresented in our study, such as Asia and Latin America.

Fifth, the anonymous nature of our dataset provided us with demographic information on the BAs but no actual contact information. As such, we were unable to collect additional information on the investors that would have enriched our study further. We therefore recommend future research to investigate additional interesting topics that would require survey data, such as personality assessments.

Sixth, while our sample includes relatively many international investments, many BA investments are still made locally by solitary investors. This may suggest that our sample is not representative for the entire population of BAs and may differ in some demographic characteristics, such as international background, education, or net worth. We therefore

believe that our findings would hold for other organized angel groups but may not be representative of solitary BAs. We therefore encourage future research to validate our findings with BAs in different contexts.

Conclusion

This article investigated the performance effect of cross-border investments in angel groups. First, it showed that the relationship between (geographic and cultural) distance and BA investment returns describes an inverted U-shape. Second, it demonstrated that angel groups can pool resources in a way that prevents distance-related transaction costs from materializing. Teaming up with fellow investors can thus increase investment returns when making cross-border investments. With these insights, this paper provides important contributions to our knowledge on the emerging topics of BA internationalization and syndication.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

References

Abbay, Aradom Gebrekidan, Roel PJH Rutten, and Paul M De Graaf. 2018. "Social Capital, Geographical Distance and Transaction Costs: An Empirical Analysis of Social Networks in African Rural Areas." *Review of Urban & Regional Development Studies* 30 (3): 202–224.

Agndal, Henrik, and Sylvie Chetty. 2007. "The Impact of Relationships on Changes in Internationalisation Strategies of Smes." *European Journal of Marketing* 41 (11/12): 1449–1474. doi:10.1108/03090560710821251.

Alchian, Armen A, and Harold Demsetz. 1972. "Production, Information Costs, and Economic Organization." *The American Economic Review* 62 (5): 777–795.

Ali, Sana. 2017. "Understanding the Nature and Impact of the Business Angels in Funding Research and Innovation." In *ZEW-Gutachten Und Forschungsberichte, Zentrum Für Europäische Wirtschaftsforschung (ZEW)*, edited by Pierre Marro and Luuk Borg, 1–214. Mannheim, Germany: Zentrum Für Europäische WirtschaftsforschungIt's. https://www.econstor.eu/bitstream/10419/181907/1/1029377022.pdf

Andersson, Ulf, and Mats Forsgren. 2000. "In Search of Centre of Excellence: Network Embeddedness and Subsidiary Roles in Multinational Corporations." *MIR: Management International Review* 40 (4): 329–350.

Antretter, Torben, Ivo Blohm, Dietmar Grichnik, and Joakim Wincent. 2019. "Predicting New Venture Survival: A Twitter-Based Machine Learning Approach to Measuring Online Legitimacy." *Journal of Business Venturing Insights* 11: 1–8. doi:10.1016/j.jbvi.2018.e00109.

Antretter, Torben, Charlotta Sirén, Dietmar Grichnik, and Joakim Wincent. 2020. "Should Business Angels Diversify Their Investment Portfolios to Achieve Higher Performance? the Role of Knowledge Access Through Co-Investment Networks." *Journal of Business Venturing* 35: 5.

Bacon-Gerasymenko, Violetta, Jonathan D Arthurs, and Sam Y Cho. 2020. "How and When Investment Horizons Determine Venture Capital Firms' Attention Breadth to Portfolio Companies." *Entrepreneurship Theory and Practice* 44 (3): 475–503. doi:10.1177/1042258718824957.

Beckerman, Wilfred. 1956. "Distance and the Pattern of Intra-European Trade." *The Review of Economics and Statistics* 38 (1): 31–40. doi:10.2307/1925556.

Berchicci, Luca, Jorn H Block, and Philipp G Sandner. 2011. "The Influence of Geographical Proximity and Industry Similarity in a Business Angel's Investment Choice." *Available at SSRN 1964618*.

Beugelsdijk, Sjoerd, and Ram Mudambi. 2014. "Mnes as Border-Crossing Multi-Location Enterprises: The Role of Discontinuities in Geographic Space". In *Location of International Business Activities*, 8–34. New York, NY:Springer. https://link.springer.com/content/pdf/10.1057/jibs.2013.23.pdf

Beugelsdijk, Sjoerd, Tatiana Kostova, Vincent E Kunst, Ettore Spadafora, and Marc Van Essen. 2018. "Cultural Distance and Firm Internationalization: A Meta-Analytical Review and Theoretical Implications." *Journal of Management* 44 (1): 89–130. doi:10.1177/0149206317729027.

Black, Bernard S, and Ronald J Gilson. 1998. "Venture Capital and the Structure of Capital Markets: Banks versus Stock Markets." *Journal of Financial Economics* 47 (3): 243–277. doi:10.1016/S0304-405X(97)00045-7.

Blohm, Ivo, Torben Antretter, Joakim Wincent, Charlotta Sirén, and Dietmar Grichnik. 2020. "It's a Peoples Game, Isn't It?! A Comparison Between the Investment Returns of Business Angels and Machine Learning Algorithms." *Entrepreneurship Theory and Practice*. https://journals.sagepub.com/eprint/DEIHMQIFRJVIGUDQURJE/full

Bonini, Stefano, Vincenzo Capizzi, Mario Valletta, and Paola Zocchi. 2018a. "Angel Network Affiliation and Business Angels' Investment Practices." *Journal of Corporate Finance* 50: 592–608. doi:10.1016/j.jcorpfin.2017.12.029.

Bonini, Stefano, Vincenzo Capizzi, Mario Valletta, and Paola Zocchi. 2018b. "Groups, Networks and the Business Angels' Investment Practices." *Journal of Corporate Finance* 50: 592–608. doi:10.1016/j.jcorpfin.2017.12.029.

Bonini, Stefano, Vincenzo Capizzi, and Paola Zocchi. 2019a. "The Performance of Angel-Backed Companies." *Journal of Banking & Finance* 100: 328–345. doi:10.1016/j.jbankfin.2018.12.006.

Bonini, Stefano, Vincenzo Capizzi, and Paola Zocchi. 2019b. "The Role of Angel Syndicates on the Demand and Supply of Informal Venture Capital." In *New Frontiers in Entrepreneurial Finance Research*, edited by Tom Vanacker, Cristiano Bellavitis, Filatotchev Igor, and Dzidziso Samuel Kamuriwo, 13–49. London, UK: World Scientific Publishing.

Bowen, David E, and Gareth R Jones. 1986. "Transaction Cost Analysis of Service Organization-Customer Exchange." *Academy of Management Review* 11 (2): 428–441. doi:10.2307/258470.

Brander, James A, Raphael Amit, and Werner Antweiler. 2002. "Venture-capital Syndication: Improved Venture Selection Vs. The Value-added Hypothesis." *Journal of Economics & Management Strategy* 11 (3): 423–452. doi:10.1111/j.1430-9134.2002.00423.x.

Buchner, Axel, Abdulkadir Mohamed, and Armin Schwienbacher. 2017. "Diversification, Risk, and Returns in Venture Capital." *Journal of Business Venturing* 32 (5): 519–535. doi:10.1016/j.jbusvent.2017.05.005.

Buchner, Axel, Susanne Espenlaub, Arif Khurshed, and Abdulkadir Mohamed. 2018. "Cross-Border Venture Capital Investments: The Impact of Foreignness on Returns." *Journal of International Business Studies* 49 (5): 575–604. doi:10.1057/s41267-017-0116-6.

Butticè, Vincenzo, Annalisa Croce, and Elisa Ughetto. 2021. "Network Dynamics in Business Angel Group Investment Decisions." *Journal of Corporate Finance* 66. https://doi.org/10.1016/j.jcorpfin.2020.101812

Capizzi, Vincenzo. 2015. "The Returns of Business Angel Investments and Their Major Determinants." *Venture Capital* 17 (4): 271–298. doi:10.1080/13691066.2015.1092264.

Carpentier, Cécile, and Jean-Marc Suret. 2015. "Angel Group Members' Decision Process and Rejection Criteria: A Longitudinal Analysis." *Journal of Business Venturing* 30 (6): 808–821. doi:10.1016/j.jbusvent.2015.04.002.

Chattopadhyay, Prithviraj, Elizabeth George, Jiping Li, and Vishal Gupta. 2020. "Geographical Dissimilarity and Team Member Influence: Do Emotions Experienced in the Initial Team Meeting Matter?" *Academy of Management Journal* 63 (6): 1807–1839.

Chemmanur, Thomas J, and Zhaohui Chen. 2014. "Venture Capitalists versus Angels: The Dynamics of Private Firm Financing Contracts." *The Review of Corporate Finance Studies* 3 (1–2): 39–86. doi:10.1093/rcfs/cfu009.

Christensen, Jesper Lindgaard. 2011. "Should Government Support Business Angel Networks? The Tale of Danish Business Angels Network." *Venture Capital* 13 (4): 337–356.

Colombo, Oskar. 2021. "The Use of Signals in New-Venture Financing: A Review and Research Agenda." *Journal of Management* 47 (1): 237–259. doi:10.1177/0149206320911090.

Coval, Joshua D, and Tobias J Moskowitz. 1999. "Home Bias at Home: Local Equity Preference in Domestic Portfolios." *The Journal of Finance* 54 (6): 2045–2073. doi:10.1111/0022-1082.00181.

Coval, Joshua D, and Tobias J Moskowitz. 2001. "The Geography of Investment: Informed Trading and Asset Prices." *The Journal of Political Economy* 109 (4): 811–841. doi:10.1086/322088.

Cowling, Marc, Ross Brown, and Neil Lee. 2021. "The Geography of Business Angel Investments in the UK: Does Local Bias (Still) Matter?" *Environment & Planning A* 53 (5): 1180–1200. https://doi.org/10.1177/0308518X20984484

Cressy, Robert, Alessandro Malipiero, and Federico Munari. 2014. "Does VC Fund Diversification Pay Off? An Empirical Investigation of the Effects of VC Portfolio Diversification on Fund Performance." *International Entrepreneurship and Management Journal* 10 (1): 139–163.

Croce, Annalisa, Francesca Tenca, and Elisa Ughetto. 2017. "How Business Angel Groups Work: Rejection Criteria in Investment Evaluation." *International Small Business Journal* 35 (4): 405–426. doi:10.1177/0266242615622675.

Cumming, Douglas, and Sofia Johan. 2007. "Advice and Monitoring in Venture Finance." *Financial Markets and Portfolio Management* 21 (1): 3–43. doi:10.1007/s11408-006-0041-3.

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

Cumming, Douglas, April Knill, and Kelsey Syvrud. 2016. "Do International Investors Enhance Private Firm Value? Evidence from Venture Capital." *Journal of International Business Studies* 47 (3): 347–373.

Cumming, Douglas, and Minjie Zhang. 2019. "Angel Investors Around the World." *Journal of International Business Studies* 50 (5): 692–719. doi:10.1057/s41267-018-0178-0.

Dai, Na, Hoje Jo, and Sul 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.

Dai, Na, and Rajarishi Nahata. 2016. "Cultural Differences and Cross-Border Venture Capital Syndication." *Journal of International Business Studies* 47 (2): 140–169. doi:10.1057/jibs.2015.32.

De Clercq, Dirk, and Dimo Dimov. 2004. "Explaining Venture Capital Firms' Syndication Behaviour: A Longitudinal Study." *Venture Capital: An International Journal of Entrepreneurial Finance* 6 (4): 243–256. doi:10.1080/1369106042000277688.

Drover, Will, Lowell Busenitz, Sharon Matusik, David Townsend, Aaron Anglin, and Gary Dushnitsky. 2017. "A Review and Road Map of Entrepreneurial Equity Financing Research: Venture Capital, Corporate Venture Capital, Angel Investment, Crowdfunding, and Accelerators." *Journal of Management* 43 (6): 1820–1853. doi:10.1177/0149206317690584.

Elfring, Tom, and Willem Hulsink. 2003. "Networks in Entrepreneurship: The Case of High-Technology Firms." *Small Business Economics* 21 (4): 409–422. doi:10.1023/A:1026180418357.

Forsgren, Mats. 2016. "A Note on the Revisited Uppsala Internationalization Process Model–the Implications of Business Networks and Entrepreneurship." *Journal of International Business Studies* 47 (9): 1135–1144. doi:10.1057/s41267-016-0014-3.

Franić, Sanda, and Mateja Drnovšek. 2019. "The Role of Regulatory Focus and Cognitive Style in Business Angels' Evaluation of an Investment Opportunity." *Venture Capital* 21 (4): 353–377. doi:10.1080/13691066.2019.1599191.

Fu, Yawei, and Ng Sin Huei. 2020. "Local Bias and Performance of Venture Capital Institutions: Evidence from the Chinese Venture Capital Market." *Journal of Asia Business Studies* 15 (1): 174–197. https://doi.org/10.1108/JABS-12-2019-0366

Gompers, Paul a, Josh Lerner, Margaret M Blair, and Thomas Hellmann. 1998. "What Drives Venture Capital Fundraising?" *Brookings Papers on Economic Activity Microeconomics*, 1998:149–204.

Granovetter, Mark. 1973. "The Strength of Weak Ties." *The American Journal of Sociology* 78 (6): 1360–1380. doi:10.1086/225469.

Greenwood, Robin, and Stefan Nagel. 2009. "Inexperienced Investors and Bubbles." *Journal of Financial Economics* 93 (2): 239–258. doi:10.1016/j.jfineco.2008.08.004.

Gregson, Geoff, Sacha Mann, and Richard Harrison. 2013. "Business Angel Syndication and the Evolution of Risk Capital in a Small Market Economy: Evidence from Scotland." *Managerial and Decision Economics* 34 (2): 95–107. doi:10.1002/mde.2595.

Gregson, Geoff, A J. Bock, and R T. Harrison. 2017. "A Review and Simulation of Business Angel Investment Returns." *Venture Capital* 19 (4): 285–311. doi:10.1080/13691066.2017.1332546.

Guenther, Christina, Sofia Johan, and Denis Schweizer. 2018. "Is the Crowd Sensitive to Distance? —How Investment Decisions Differ by Investor Type." *Small Business Economics* 50 (2): 289–305.

Haans, Richard FJ, Constant Pieters, and Zi-Lin He. 2016. "Thinking About U: Theorizing and Testing U- and Inverted U-shaped Relationships in Strategy Research." *Strategic Management Journal* 37 (7): 1177–1195. doi:10.1002/smj.2399.

Hain, Daniel, Sofia Johan, and Daojuan Wang. 2016. "Determinants of Cross-Border Venture Capital Investments in Emerging and Developed Economies: The Effects of Relational and Institutional Trust." *Journal of Business Ethics* 138 (4): 743–764. doi:10.1007/s10551-015-2772-4.

Harrison, Richard T, and Colin M Mason. 2008. "Sampling and Data Collection in Business Angel Research." *Venture Capital* 10 (4): 305–308. doi:10.1080/13691060802380080.

Harrison, Richard, Colin Mason, and Paul Robson. 2010. "Determinants of Long-Distance Investing by Business Angels in the UK." *Entrepreneurship and Regional Development* 22 (2): 113–137. doi:10.1080/08985620802545928.

Harrison, Richard T. 2017. "The Internationalisation of Business Angel Investment Activity: A Review and Research Agenda." *Venture Capital* 19 (1–2): 119–127. doi:10.1080/13691066.2016.1260111.

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

Hofstede, Geert. 1980. *Culture's Consequences: International Differences in Work-Related Values*. Vol. 5. Newbury Park, CA: Sage.

Hofstede, Geert. 2001. *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*. Newbury Park, CA: Sage.

Hofstede Insights. 2020. *Country Comparison Tool*. Helsinki, Finland.

Hong, Lu, and Scott E Page. 2001. "Problem Solving by Heterogeneous Agents." *Journal of Economic Theory* 97 (1): 123–163. doi:10.1006/jeth.2000.2709.

Hymer, Stephen Herbert. 1976. *International Operations of National Firms*. Cambridge, MA: MIT Press.

IPEV. 2018. *International Private Equity and Venture Capital Valuation Guidelines*.

Jääskeläinen, Mikko, and Markku 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.

Jensen, Michael C, and William H Meckling. 1976. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics* 3 (4): 305–360. doi:10.1016/0304-405X(76)90026-X.

Johanson, Jan, and Jan-Erik Vahlne. 1977. "The Internationalization Process of the Firm—A Model of Knowledge Development and Increasing Foreign Market Commitments." *Journal of International Business Studies* 8 (1): 23–32. doi:10.1057/palgrave.jibs.8490676.

Johanson, Jan, and Jan-Erik Vahlne. 2009. "The Uppsala Internationalization Process Model Revisited: From Liability of Foreignness to Liability of Outsidership." *Journal of International Business Studies* 40 (9): 1411–1431. doi:10.1057/jibs.2009.24.

Kaplan, Steven N, and Antoinette Schoar. 2005. "Private Equity Performance: Returns, Persistence, and Capital Flows." *The Journal of Finance* 60 (4): 1791–1823. doi:10.1111/j.1540-6261.2005.00780.x.

Kelly, Peter. 2007. "Business Angel Research: The Road Traveled and the Journey Ahead," Chapters. In *Handbook of Research on Venture Capital, Chapter 12*, edited by Hans Landström. Edward Elgar Publishing. https://ideas.repec.org/h/elg/eechap/3792_12.html

Kerr, William R, Josh Lerner, and Antoinette Schoar. 2014. "The Consequences of Entrepreneurial Finance: Evidence from Angel Financings." *The Review of Financial Studies* 27 (1): 20–55. doi:10.1093/rfs/hhr098.

Khavul, Susanna, and David Deeds. 2016. "The Evolution of Initial Co-Investment Syndications in an Emerging Venture Capital Market." *Journal of International Management* 22 (3): 280–293. doi:10.1016/j.intman.2016.03.006.

Khurshed, Arif, Abdulkadir Mohamed, Armin Schwienbacher, and Fan Wang. 2020. "Do Venture Capital Firms Benefit from International Syndicates?" *Journal of International Business Studies* 51: 986–1007. https://link.springer.com/content/pdf/10.1057/s41267-019-00296-8.pdf

Kim, W Chan, and Renée Mauborgne. 2004. *Blue Ocean Strategy, Expanded Edition: How to Create Uncontested Market Space and Make the Competition Irrelevant*. Cambridge, MA: Harvard Business Press.

Kogut, Bruce, and Harbir Singh. 1988. "The Effect of National Culture on the Choice of Entry Mode." *Journal of International Business Studies* 19 (3): 411–432. doi:10.1057/palgrave.jibs.8490394.

Leppäaho, Tanja, Sylvie Chetty, and Pavlos Dimitratos. 2018. "Network Embeddedness in the Internationalization of Biotechnology Entrepreneurs." *Entrepreneurship & Regional Development* 30 (5–6): 562–584. doi:10.1080/08985626.2017.1408697.

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

Lerner, Josh, Antoinette Schoar, Stanislav Sokolinski, and Karen Wilson. 2018. "The Globalization of Angel Investments: Evidence Across Countries." *Journal of Financial Economics* 127 (1): 1–20. doi:10.1016/j.jfineco.2017.05.012.

Liberti, José María, and Mitchell A Petersen. 2019. "Information: Hard and Soft." *Review of Corporate Finance Studies* 8 (1): 1–41. doi:10.1093/rcfs/cfy009.

Lin, Mingfeng, and Siva Viswanathan. 2016. "Home Bias in Online Investments: An Empirical Study of an Online Crowdfunding Market." *Management Science* 62 (5): 1393–1414. doi:10.1287/mnsc.2015.2206.

Liu, Manhong Mannie. 2015. *Angels Without Borders: Trends and Policies Shaping Angel Investment Worldwide*. Singapore: World Scientific.

Lutz, Eva, Marko Bender, Ann-Kristin Achleitner, and Christoph Kaserer. 2013. "Importance of Spatial Proximity Between Venture Capital Investors and Investees in Germany." *Journal of Business Research* 66 (11): 2346–2354. doi:10.1016/j.jbusres.2012.04.016.

Madanoglu, Melih, Esra Memili, and Alfredo De Massis. 2020. "Home-Based Family Firms, Spousal Ownership and Business Exit: A Transaction Cost Perspective." *Small Business Economics* 54 (4): 991–1006. doi:10.1007/s11187-018-00131-8.

Maseland, Robbert, Douglas Dow, and Piers Steel. 2018. "The Kogut and Singh National Cultural Distance Index: Time to Start Using It as a Springboard Rather Than a Crutch." *Journal of International Business Studies* 49 (9): 1154–1166. doi:10.1057/s41267-018-0183-3.

Mason, Colin M, and Richard T Harrison. 2002. "Is It Worth It? the Rates of Return from Informal Venture Capital Investments." *Journal of Business Venturing* 17 (3): 211–236.

Mason, Colin, Tiago Botelho, and Richard Harrison. 2016. "The Transformation of the Business Angel Market: Empirical Evidence and Research Implications." *Venture Capital* 18 (4): 321–344. doi:10.1080/13691066.2016.1229470.

Mason, Colin, Tiago Botelho, and Richard Harrison. 2019. "The Changing Nature of Angel Investing: Some Research Implications." *Venture Capital* 21 (2–3): 177–194. doi:10.1080/13691066.2019.1612921.

Matusik, Sharon F, and Markus a Fitza. 2012. "Diversification in the Venture Capital Industry: Leveraging Knowledge Under Uncertainty." *Strategic Management Journal* 33 (4): 407–426. doi:10.1002/smj.1942.

Meyer, Klaus E, Arjen Van Witteloostuijn, and Sjoerd Beugelsdijk. 2017. "What's in a P? Reassessing Best Practices for Conducting and Reporting Hypothesis-Testing Research." *Journal of International Business Studies* 48: 535–551.

Mingo, Santiago, Francisco Morales, and Luis Alfonso Dau. 2018. "The Interplay of National Distances and Regional Networks: Private Equity Investments in Emerging Markets." *Journal of International Business Studies* 49 (3): 371–386. doi:10.1057/s41267-017-0141-5.

Mitteness, Cheryl R, Rich DeJordy, Manju K Ahuja, and Richard Sudek. 2016. "Extending the Role of Similarity Attraction in Friendship and Advice Networks in Angel Groups." *Entrepreneurship Theory and Practice* 40 (3): 627–655. doi:10.1111/etap.12135.

Murzacheva, Ekaterina, and Jonathan Levie. 2020. "Entrepreneurial Finance Journeys: Embeddedness and the Finance Escalator." *Venture Capital* 22 (2): 185–214. doi:10.1080/13691066.2020.1767756. https://www.tandfonline.com/doi/pdf/10.1080/13691066.2020.1767756?casa_token=vunVVNlPVFAAAAAA:ul12nVwGdit9e0N3snXB6rgp3clVv-cxSGxNnQcS29AQsGGZUa5v3GimMFQ7GghHw0Q_JsrwBdDx

Nana, PV Nketcha. 2014. "Legal Rights, Information Sharing, and Private Credit: New Cross-Country Evidence." *The Quarterly Review of Economics and Finance* 54 (3): 315–323. doi:10.1016/j.qref.2014.02.002.

O'-Brien, Robert M. 2007. "A Caution Regarding Rules of Thumb for Variance Inflation Factors." *Quality & Quantity* 41 (5): 673–690. doi:10.1007/s11135-006-9018-6.

OECD.Stat. 2021. "Venture Capital Investments." In *Venture Capital Investment Reports*. Paris, France.

Ottaviano, Gianmarco IP, and Giovanni Peri. 2006. "The Economic Value of Cultural Diversity: Evidence from US Cities." *Journal of Economic Geography* 6 (1): 9–44. doi:10.1093/jeg/lbi002.

Ouchi, William G. 1980. "Markets, Bureaucracies, and Clans." *Administrative Science Quarterly* 25 (1): 129–141. doi:10.2307/2392231.

Paul, Stuart, and Geoff Whittam. 2010. "Business Angel Syndicates: An Exploratory Study of Gatekeepers." *Venture Capital* 12 (3): 241–256. doi:10.1080/13691061003711438.

Politis, Diamanto. 2008. "Business Angels and Value Added: What Do We Know and Where Do We Go?" *Venture Capital* 10 (2): 127–147.

Shane, Scott A 1992. "The Effect of Cultural Differences in Perceptions of Transaction Costs on National Differences in the Preference for Licensing." Paper presented at the Academy of Management Proceedings. Las Vegas, NV.

Shane, Scott 2005. "Angel Investing: A Report Prepared for the Federal Reserve Banks of Atlanta, Cleveland, Kansas City, Philadelphia and Richmond." October 1. Cleveland, Kansas City, Philadelphia and Richmond.

Shenkar, Oded, Stephen B Tallman, Hao Wang, and Jie Wu. 2020. "National Culture and International Business: A Path Forward." *Journal of International Business Studies* 1–18. doi:10.1057/s41267-020-00375-1.

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

Sørheim, Roger. 2003. "The Pre-Investment Behaviour of Business Angels: A Social Capital Approach." *Venture Capital* 5 (4): 337–364. doi:10.1080/1369106032000152443.

Tsang, Eric WK, and Paul SL Yip. 2007. "Economic Distance and the Survival of Foreign Direct Investments." *Academy of Management Journal* 50 (5): 1156–1168.

Tung, Rosalie L, and Alain Verbeke. 2010. "Beyond Hofstede and GLOBE: Improving the Quality of Cross-Cultural Research." *Journal of International Business Studies* 41: 1259–1274. doi:10.1057/jibs.2010.41.

Vahlne, Jan-Erik, and Jan Johanson. 2017. "From Internationalization to Evolution: The Uppsala Model at 40 Years." *Journal of International Business Studies* 48 (9): 1087–1102. doi:10.1057/s41267-017-0107-7.

Wang, Lanfang, and Susheng Wang. 2012. "Economic Freedom and Cross-Border Venture Capital Performance." *Journal of Empirical Finance* 19 (1): 26–50. doi:10.1016/j.jempfin.2011.10.002.

Werth, Jochen Christian, and Patrick Boeert. 2013. "Co-Investment Networks of Business Angels and the Performance of Their Start-Up Investments." *International Journal of Entrepreneurial Venturing 1* 5 (3): 240–256. doi:10.1504/IJEV.2013.055292.

Wetzel, William E. 1983. "Angels and Informal Risk Capital." *Sloan Management Review (Pre-1986)* 24 (4): 23.

White, Brett A, and John Dumay. 2017. "Business Angels: A Research Review and New Agenda." *Venture Capital* 19 (3): 183–216. doi:10.1080/13691066.2017.1290889.

Williamson, O. E. 1975. *Markets and hierarchies: Analysis and antitrust implications.* New York: Free Press.

Williamson, Oliver E. 1981. "The Economics of Organization: The Transaction Cost Approach." *The American Journal of Sociology* 87 (3): 548–577. doi:10.1086/227496.

Williamson, Oliver E. 1985. "The Economic Institutions of Capitalism. Firms, Markets, Relational Contracting." In *Das Summa Summarum des Management*. 61–75. New York, NY:Springer.

Wirtz, Peter, Christophe Bonnet, Laurence Cohen, and Vincenzo Capizzi. 2019. "Angel Cognition and Active Involvement in BA Groups: A Cross-Country Empirical Analysis." *Available at SSRN 3369490*.

World Bank. 2020. "Stock Markets." *World Development Indicators*. http://wdi.worldbank.org/table/5.4

World Bank. 2021. *Strength of Legal Rights Index*. Geneva, Switzerland. https://databank.worldbank.org/reports.aspx?source=2&series=IC.LGL.CRED.XQ&country=

Yang, Tiantian, and Howard E Aldrich. 2014. "Who's the Boss? Explaining Gender Inequality in Entrepreneurial Teams." *American Sociological Review* 79 (2): 303–327.

Zu Knyphausen-Aufseß, Dodo, and Rouven Westphal. 2008. "Do Business Angel Networks Deliver Value to Business Angels?" *Venture Capital* 10 (2): 149–169.