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Internationalization of Business Angel Investments: The Role of Investor Experience

Annalisa Croce

Politecnico di Milano, DIG, Italy

Armin Schwienbacher

SKEMA Business School – Université Côte d'Azur, France

Elisa Ughetto

Politecnico di Torino, DIGEP and BRICK, Collegio Carlo Alberto, Italy

Abstract

In this study, we examine business angels (BAs)' appetite for investing abroad and the role played by investment and entrepreneurial experience. To investigate BAs' propensity to internationalize their investments, we study cross-border deals and cultural distance. Using an international sample of US and European BA deals, we find that both BAs' investment and entrepreneurial experiences foster the internationalization of their investments, consistent with predictions on the effect of experience on local investment bias. When splitting experience into domestic and foreign, we find that the former increases while the latter decreases local bias. When we separate US and European BAs, we find that the experiential background of BAs does not matter in the same way in Europe and in the US: while the general results are confirmed in Europe, both investment and entrepreneurial experience have a reduced impact in the US. We interpret these results in light of the reduced risk aversion of US BAs that lowers transaction costs.

Contact details of the authors:

Annalisa Croce, Politecnico di Milano, DIG, Via Lambruschini 4/b, 20156 Milano, Italy, email: annalisa.croce@polimi.it;

Armin Schwienbacher, SKEMA Business School, Avenue Willy Brandt, 59777 Euralille, France, email: armin.schwienbacher@skema.edu;

Elisa Ughetto, Politecnico di Torino, DIGEP, Corso Duca degli Abruzzi, 24, 10129, Torino, Italy & BRICK, Collegio Carlo Alberto, Piazza Arbarello, 8, Torino, Italy, email: elisa.ughetto@polito.it.

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Abstract

In this study, we examine business angels (BAs)' appetite for investing abroad and the role played by investment and entrepreneurial experience. To investigate BAs' propensity to internationalize their investments, we study cross-border deals and culturally distant investments. Using an international sample of US and European BA deals, we find that both individual investment and entrepreneurial experience foster the internationalization of BAs' investments, consistent with the predictions based upon the local bias theory. When splitting experience into domestic and foreign, we find that the former increases while the latter decreases local bias. When we separate US and European BAs, we find that the experiential background of BAs does not matter in the same way in Europe and in the US: while the general results are confirmed in Europe, both investment and entrepreneurial experience have a reduced impact in the US. We interpret these results in light of the reduced risk aversion of US BAs that lowers transaction costs.

1. Introduction

Business angels (BAs) have typically been portrayed as investors who invest in local companies (Maula et al., 2005; Wetzel, 1983). They tend to overweight geographically close investment opportunities because geographical proximity to investment targets facilitates the screening and evaluation of start-ups and allows BAs to efficiently provide post-investment advice and monitoring. This limitation in the geographic scope of investments, besides providing informational advantages to BAs, also comes at the expense of reduced diversification benefits and diminished capability in learning from others and in acquiring experience that is different than the one gained locally. Such lack of further learning and new experience affects investment performance adversely, as evidenced in the venture capital (VC) industry (Cumming et al., 2016).

Prior finance literature has documented a strong association between cross-border/culturally distant investments and the presence of informational disadvantages, leading to a "local bias" in investors' investment attitudes (Coval and Moskowitz, 1999; 2001). According to this view, investing across borders and in countries in which a greater cultural disparity is in place should, *ceteris paribus*,

lead to greater risk-taking by investors due to increased information asymmetry (a pervasive component of transaction costs; Schwens and Kabst, 2009). This would, in principle, deter such investments. Studies on BAs through the 2000s supported this view, reporting that angel investing was largely a domestic activity (see May and Liu, 2016, for a review), thus limiting scholarly interest to BA activity internationally (Harrison et al., 2010).

However, although much BA investing is still localized¹, BAs do consider making long-distance investments, especially if good opportunities are available beyond their preferred maximum distance (Harrison et al., 2010; Harrison, 2017). Cross-border angel investments have grown in recent years (EBAN, 2017; Gvetadze et al., 2020; Harrison et al., 2010)² and the emergence of transnational initiatives such as the European Business Angels Network and the Business Angel Network of Southeast Asia have encouraged the involvement of angel investors in international deals (May and Liu, 2016).

To our knowledge, the internationalization of BA investments³ is still an unexplored dimension of operations in the BA market. Prior studies have focused on the global nature of BA investing, examining how the legal and cultural environments affect BAs' investments globally (Cumming and Zhang, 2019; Lerner et al., 2018). However, none of these studies has considered whether these investments are domestic or cross-border. Moreover, extant works have not studied the importance of individual-level antecedents (such as experience) in affecting the geographical reach of BAs' investments across different institutional settings. This is certainly a worthy endeavour in the context of international entrepreneurship and business studies.

¹ This is in part also due to the tax breaks offered in many countries to invest into early-stage domestic companies (e.g. EIS and VCT schemes) (Croce et al., 2020; Mason et al., 2021).

² A report by the European Investment Fund (EIF) studying angels who invest jointly with the EIF highlights that 12% of their investments are cross-border (Gvetadze et al., 2020). A similar percentage of cross-border angel investments (about 10%) is reported by a study developed for the European Commission based upon a survey and interviews (Ali et al., 2017).

³ Throughout the paper, we use the terms 'internationalization of investments' and 'cross-border investments' interchangeably. In other studies such as Cumming and Zhang (2019), the term 'internationalization' refers instead to the fact that BA markets develop worldwide (e.g. on different continents), without necessarily referring to whether the investments are domestic or cross-border.

In response to calls for more research on the cross-border investment activity of BAs (Harrison et al., 2010), we propose a study of cross-border deals and culturally distant investments (Hofstede, 1980). Drawing from the theory on “local bias” (Coval and Moskowitz, 1999; 2001; Cumming and Dai, 2010; Ivkovicz and Weisbenner, 2005) and on the cognitive perspective of institutional theory (Bruton et al., 2005), we develop a framework to directly address the question of angels’ appetite for investing abroad and the role played by individual experience. According to the “local bias” argument, investors are inclined to invest disproportionately into domestic assets, thus deviating from portfolio diversification strategies that classical approaches in finance would suggest to optimize risk-return patterns. Prior evidence on local bias in VC markets has not investigated how local bias depends on investors’ characteristics. An interesting and intertwined question is whether and to what extent BAs’ experience (as former investors and entrepreneurs) might alleviate or reinforce such “local bias” phenomenon and how this varies across countries. Does the experiential background of angel investors reduce the informational disadvantage associated with cross-border and culturally distant investments? Or, rather, does it reinforce their attitude towards investing domestically? Are these patterns equally generalizable to the US and Europe? These questions are timely and have both academic and practical relevance.

The article contributes in at least three ways to the stream of literature in entrepreneurial finance and international business studies. First, while prior studies have examined VC cross-border investments (Cumming et al., 2016; Cumming and Dai, 2010; De Prijcker et al., 2012; Schertler and Tykvová, 2011; Wright et al., 2005 among others), they have fallen short in terms of providing insights into angels’ propensity to enter and manage investments in international markets. Both venture capitalists and angel investors fill the funding need of seed and early stage ventures in exchange for an equity stake in the company, but they differ on such issues as investment strategies, exit requirements, board involvement and ownership control. These dissimilarities are expected to inspire varying degrees of involvement in cross-border investment activities. Thus, a focus on angels

has considerable practical importance because it invites consideration of the full spectrum of investment attitudes of different players in the early stage market. Moreover, it is crucial to understand the decision-making process of business angels, since they typically invest before VC funds and thus ensure VC funds obtain investment opportunities later on.

Second, we know little about how experience works in concert with BAs' propensity to invest abroad. Thus, our unique angle is to explore how local bias in BA investments is influenced by angels' investment and entrepreneurial experience. We further study domestic and foreign experience separately. We thus bring to the forefront the base-line argument that individual experience (i.e., both investment and entrepreneurial experience) reduces BAs' local bias, thus increasing their propensity to invest abroad or in more culturally distant countries. Additionally, we delve into the relationship between experience and the extent to which BAs bridge geographical boundaries by exploring whether experience matters to the same degree in cross-border and culturally distant investments for both US and European angels. We frame this issue using the interpretative lenses of the cognitive perspective of the institutional theory. Despite the integration of capital markets and the progressive lowering of formal institutional barriers, the distinct social, cultural, and economic climates characterizing these countries make this research question deserving of further scrutiny.

Third, we link key research streams in international business (i.e., insights from the local bias theory and the cognitive perspective of institutional theory) to the existing literature on BAs in order to improve our understanding of BAs and their international activities. The extension of the analysis of the local bias and how experience can alleviate it to the BA context is interesting because of the presence of significant information asymmetries that are in place between ventures and investors. To select, coach and monitor new ventures, BAs ultimately rely on experience-based intuitions and practices, whose effectiveness is reduced by geographic distance. We argue that experience plays an instrumental role in influencing the propensity to internationalize BA investments, thus alleviating the local bias, although in a different way when we compare US and European angels.

Understanding what promotes investments outside the BAs' comfort zone is relevant and timely because it poses both a challenge and an opportunity for policy and practice: a challenge, in terms of moving beyond the conventional wisdom about the localized nature of angel investing, and an opportunity, in terms of changing the "ecosystem" of risk capital into a much larger and more vibrant and valuable setting. Moreover, examining the propensity of BAs to internationalize their investments is also worthwhile because the angel investment sector is growing and it is increasingly changing its investment practices to leverage economies (e.g., in due diligence, investment selection, investment scale and staging, coaching and monitoring) that are typically enjoyed by the VC industry⁴.

Our analysis reveals that investment and entrepreneurial experience have substantial explanatory power in shaping BAs' attitude towards investing abroad but that their effect is weaker for US investors than European investors.

The remainder of this paper is structured as follows. The next section discusses the theoretical background and puts forward testable hypotheses. Section 3 presents our data collection and sample. Section 4 examines empirically the relationship between BAs' experience and the internationalization of investments, highlighting the differences between US and European BAs. Finally, Section 5 concludes.

2 Literature review and theoretical background

The accelerating integration of global capital markets in the past two decades has affected the investment strategies of different typologies of investors markedly, providing them with the opportunity to diversify their investments internationally in public markets and realize potential gains (Chan et al., 2005). The globalization of financial markets has also gathered pace in private, unlisted

⁴ We endorse Harrison et al.'s (2010) view that cross-border investing is 'an important topic for further dedicated [angel] research' (pp. 126–127).

markets, including VC and BA markets that have expanded in most developed and developing countries (Cumming and Zhang, 2019; Landström and Mason, 2016; Lerner et al., 2018; Tenca et al., 2018). While the extant literature on BA financing has explored the macro-foundations of the emergence of BA markets worldwide, in this section we gain insight into the role played by individual BAs' experience (as former investors and entrepreneurs) in affecting angels' attitude to invest abroad or in more culturally distant countries. In conceptualizing why experience favours angels' propensity to internationalize their investments, we also consider the moderating effect of the institutional context where BAs operate. To elaborate the impact of prior individual BAs' entrepreneurial and investment experience on the propensity to realize cross-border and culturally distant investments, we develop a framework, whose theoretical reasoning supplements arguments from the "local bias" reasoning with the cognitive perspective of institutional theory (Bruton et al., 2005). Our intuition is that experience alleviates information asymmetries due to geographic distance (that cause the local bias in investments), but this effect is weaker for US investors than European ones. Figure 1 illustrates our conceptual framework.

[Insert Figure 1 here]

2.1 The internationalization of BAs' investments

Cross-border investments have been studied in VC markets (Cumming et al., 2016; Cumming and Dai, 2010; De Prijcker et al., 2012; Schertler and Tykvová, 2011; Wright et al., 2005 among others). Such investments reportedly help VC investors acquire additional and more diversified experience, also through VC syndication networks (Ter Wal et al., 2016) that include international investors. Any lack of further learning and new experience is needed to further professionalize the industry and affects performance of investments adversely, as evidenced in the VC industry (Cumming et al., 2016). Empirical evidence also shows that the international experience of VC investors helps start-ups to expand internationally (Fernhaber et al., 2009; Guler and Guillen, 2010;

Meuleman and Wright, 2011), all of which supports the importance of promoting cross-border investments by domestic BAs.

The growing recent interest in the emergence of BAs' markets internationally has been addressed by De Clercq et al. (2012), Cumming and Zhang (2019) and Lerner et al. (2018), who explore how the legal and cultural environments affect BAs' investments worldwide. De Clercq et al. (2012) show that more protective legal systems and stronger embeddedness are associated with a higher incidence of micro-angel investment activity. Cumming and Zhang (2019) exploit a large dataset covering 96 countries over 1977 to 2012 and compare angel investments with private equity (PE)/VC investments. Their main finding is that BA markets, relative to PE/VC markets, arise in countries characterized by less effective legal environments and higher levels of individualism and risk-taking. Lerner et al. (2018) examine a dataset of 13 angel groups in 12 countries and find a positive impact of angel financing on firm growth, performance, survival, and follow-on fundraising, independently of countries' entrepreneur-friendliness. However, none of these studies consider whether these investments are domestic or cross-border, or whether the emergence of BA markets in different countries also spurs cross-border investments. These studies rather help understand why BA markets have emerged with distinctive traits in different countries in the last years.

2.2 The “local bias” argument and the cognitive perspective of institutional theory

Our theoretical reasoning draws on the “local” bias theory supplemented with cognitive institutional arguments. The limited (or lack of) information regarding distant investment opportunities determines the ‘local or home-country bias’ in investors’ investment attitudes (Coval and Moskowitz, 1999; 2001; Ivkovicz and Weisbenner, 2005), namely the propensity of investors to invest domestically. A central argument in much of the research on international finance adopting the “local bias” perspective is that the unequal distribution of information in international financial markets drives investment decisions. A common explanation of the investors’ propensity to

overweight geographically close investment opportunities is linked to the informational disadvantage that results from distant and more informationally opaque markets, which generates transaction costs (e.g. information acquisition, search and monitoring costs). Investors ignore distant investment opportunities or when they are aware of them, they have a reduced confidence in the trustworthiness of the information (Brennan et al., 2005; Hirshleifer, 2001; Jääskeläinen and Maula, 2014; Portes and Rey, 2005). The local bias has also been explained from the perspective of human psychology (Huberman, 2002), according to which investors are more comfortable in investing in firms that are geographically closer (especially in domestic and culturally similar markets) because they involve more familiarity (Huberman, 2002) and better monitoring capabilities (Coval and Moskowitz, 1999; 2001; Ivkovicz and Weisbenner, 2005).

A bias in favour of domestic investments has been found for retail investors (Karlsson and Nordén, 2007), although this is somewhat mitigated among more sophisticated and professional investors (Grinblatt and Keloharju, 2001). The latter finding on investor type suggests that experience matters, given that professional investors tend to have more experience than retail investors. The debate on the bias towards local investments has recently moved from public equity offerings to the entrepreneurial finance domain (Chan et al., 2005; Cumming and Dai, 2010; Guenther et al., 2018; Harrison et al., 2010).

For BAs, investing internationally entails costs associated with the unfamiliarity with foreign markets and institutional, cultural, and economic differences from the home market. Indeed, knowledge of the local business community and understanding of the local environment are important attributes for these informal investors, which limits their propensity to make cross-border and culturally distant investments (Mason et al., 2021). BAs largely exploit informal channels such as trusted friends and business associates to evaluate investment opportunities and are increasingly

organized through local groups or networks⁵ (Harrison et al., 2010; Mason et al., 2016; 2019). The effectiveness of these channels reduces with distance since the greater difficulty in processing ‘soft’ information about target firms and their local market conditions makes angels more exposed to informational barriers. Moreover, BAs emphasize maintaining close working relationships with entrepreneurs to provide advice and hands-on assistance (Sørheim and Landström, 2001). When investing abroad, BAs extend their investments to companies they do not necessarily know themselves or are known only to their associates, making monitoring more costly and less effective.

Differences in investors’ behaviour and the nature of economic interactions that take place between individuals and organizations are the result of varying normative, cognitive and regulatory configurations around the world (North, 1990; Busenitz et al., 2000; Wright et al., 2005). As institutional theorists argue, firms and investors are “embedded” in organizational practises, processes and structures that are in large part the product of regulative, normative and cognitive institutionalized relationships (Scott, 1995). The cognitive perspective of institutional theory (Bruton et al., 2005) adheres to the idea that particular courses of actions (and angel investments can be an example) are affected by cognitive institutional arrangements that dictate underlying risks and rewards (North, 1990). Cognitive pressures strongly influence individual behaviour: belief systems and cultural frames provide schemas and codes of behaviour that guide individuals in selecting and interpreting information. However, such cognitive constructs vary over place, with differences at country level in both the value placed on entrepreneurship, risk-taking and social institutions. Important cognitive differences concern the reliance on social networks, the extent to which the entrepreneur is recognized a high status and the entity of the punishments for entrepreneurial failure. These elements affect not only the supply of entrepreneurs in the economy, but also the willingness of investors to bear risk to support entrepreneurs and to derive nonfinancial rewards from being

⁵ Angel activity is rapidly evolving from a fragmented and anonymous activity of angels acting alone towards syndicated investments (groups of angels) (Bonini et al., 2018; 2019; Croce et al., 2017; Mason et al., 2016; 2019).

involved in the entrepreneurial process (Ding et al., 2015; Kwon and Arenius, 2010; Reynolds et al., 2002).

2.3 Hypotheses development

Previous research in VC financing has found that reputation and experience can mitigate the local bias in investments (Cumming and Dai, 2010). We extend the intuition of Cumming and Dai (2010) to the BA domain and assume that experience (both entrepreneurial and investment experience) helps reduce local bias. Recent empirical works on BAs suggest that experience affects investment performance and subsequent capital injections by venture capitalists (Croce et al., 2018). In this work, we hypothesize that more experienced angel investors have accumulated knowledge that enables them to reduce information asymmetry problems also in foreign, distant markets. Experience induces them to invest more often farther away (e.g., in a different country) as the relative cost differential is smaller with more accumulated experience.

We consider two forms of experience: investment and entrepreneurial experience. Investment experience reflects the know-how developed through previous investment activities, which is often a non-codified form of knowledge on the industry, technologies, and people (Cooper et al., 1994). Experiential knowledge as prior investors (investment experience) provides BAs with the skills needed to evaluate business opportunities and manage the investment process until exit (Croce et al., 2018). Investment experience allows to reduce the informational disadvantage in bridging geographical boundaries by means of a better access to syndicated deals in foreign markets and of the development of a universal language that goes beyond borders. Such universal language helps BAs secure privileged access to networks abroad, facilitating the identification of more valuable deal flows and providing better risk perceptions of foreign market activities (see Cumming et al., 2016, and Khurshed et al., 2020, for evidence from international VC syndicates). This may be particularly true when past deals have exposed BAs to market practices and knowledge. As such, BAs internationalize

as they gain more knowledge about how to deal with investment opportunities abroad and commit resources based on such experiential learning. Thus, we argue that the accumulation of knowledge over time through investment experience is likely to reduce the local bias in investments and favour international investments.

BAs who have been start-up creators have accumulated knowledge on how to run and manage a venture (entrepreneurial experience), which may help them to approach entrepreneurs in foreign markets, thus reducing the informational distance with invested ventures. BAs who have previously been entrepreneurs have developed a fine-grained understanding of the legal and institutional environments in which the founded start-ups operate, which may dictate their approach towards cross-border investments. Prior entrepreneurial experience provides the investor with a reservoir of information that other entrepreneurs may seek to benefit from, independently from the geographical origin of the investor. Indeed, investors with entrepreneurial experience use experience-based schemas to take decisions that rely heavily on the intuition (i.e. ‘gut feel’) developed during past entrepreneurial activities (Huang and Pearce, 2015; Huang, 2018). These experience-based intuitions and practices, which are channelled to foreign entrepreneurs when investing abroad, strengthen BAs’ access to private information and alleviate information asymmetries. They may further enable BAs to better advise their investee companies. This in turn is likely to reduce the local bias. These predictions lead us to advance the following hypothesis:

H1. There is a positive relationship between experience (i.e., investment and entrepreneurial experience) and the internationalization of investments (either cross-border or in more culturally distant countries).

However, these patterns might not be equally generalizable to the US and Europe, where experience might help to reduce BAs’ local bias in investments with different degrees of intensity. Consistent with the cognitive perspective of institutional theory (Bruton et al., 2005) which builds on

culture of societies and institutions, we argue that countries differ in both the value they place on entrepreneurship, risk-taking and social institutions. Such cognitive institutional arrangements not only directly inform the internationalization of BAs' investments but also do so indirectly by moderating the ease with which experience lowers the local bias.

In terms of culture of entrepreneurship and risk taking, the US recognizes and awards individuals' willingness to take risks and enter into entrepreneurship more than in Europe. The US society is characterized by higher levels of individualism and lower levels of uncertainty avoidance than Europe (Hofstede, 1980; 2010). In fact, the US culture emphasizes competition, personal initiative, and achievement (Ketkar and Acs, 2013), so that entrepreneurial spirit is encouraged and rewarded and the punishment for failure is low.⁶ Autonomy, self-confidence, and independent action take precedence over social ties (Bruton et al., 2005; Busenitz et al., 2000). In contrast, European culture is marked by high levels of embeddedness, meaning that business transactions are managed more informally through relationships developed and maintained over time (Declercq et al., 2012). Social institutions in Europe are in fact characterized by stronger reliance on social networks (Bruton et al., 2005).

This institutional framework suggests that the intensity by which experience (both entrepreneurial and investment experience) reduces the local bias and increases BAs' propensity to internationalize depends upon the context under scrutiny. Extending the institutional theory perspective, we postulate that in a context that rewards risk-taking and independent action by individuals such as the US (Bruton et al., 2005; Busenitz et al., 2000), experience plays a less crucial role in overcoming local bias in investing. The enhanced attitude towards risk-taking and the lower dependence on domain familiarity (which reflects local embedded relationships, regulatory frameworks, prevailing conventions, and codes of behaviour) that BAs experiment in the US setting

⁶ For example, the 2000 Global Entrepreneurship Monitor shows that fear of failure prevented just one in five adults from starting a venture in the United States, while in France and Germany that share increased to almost one in two (Reynolds et al., 2002).

are responsible for stimulating themselves cross-border activities. It follows that a BA that operates in the US in which the culture of risk is encouraged would not rely as heavily on experience to overcome the uncertainty involved in cross-border deals compared with a European investor acting in a context where risk-taking is not emphasized and where informal institutional settings and tacit rules are dominant. In fact, in Europe more than in the US, the experiential learning acquired and developed through previous experience (both entrepreneurial and investment experience) creates procedural knowledge about how to handle the higher agency risks and monitoring costs associated with the greater uncertainty of internationalization. Thus, we assume that experience plays a secondary role in the decision to internationalize for US angels compared with European investors. We therefore put forward the following hypothesis:

H2. The positive relationship between experience (i.e., investment and entrepreneurial experience) and the internationalization of investments (either cross-border or in more culturally distant countries) is mitigated for US investors compared with European ones.

3. Data

3.1 Data source

The main data source for this study is Crunchbase, a platform maintained by Crunchbase, Inc. for finding business and financing information about private and public start-ups. Crunchbase derives its data from two main sources: a large network of investment firms and a community of contributors (i.e. executives, investors, and entrepreneurs). Information added to the dataset is reviewed by the managing team of Crunchbase and processed with artificial intelligence and machine learning algorithms. Company profiles are also enriched by additional details that these algorithms derive from searching the web. The dataset is becoming increasingly popular with scholars because it contains

detailed information on start-up activity and financing⁷. In particular, it is well suited for conducting research on BAs given its coverage of individuals that invest in start-ups, which is guaranteed by the partnership that Crunchbase signed in 2013 with AngelList, a US website that helps start-ups raise money from angels.

We obtained data from Crunchbase on investments until 2019. The information reported in the database on innovative start-ups that have raised money consists of company size, year of establishment, location, industrial field, corporate status (i.e. still operating, acquired, IPO, or closed), number of financing rounds received, amount of money raised in each financing round, and typology of financing received (e.g. angel, seed, series A venture funding, private equity). Crunchbase contains records on investors that are broadly classified as individuals, companies, or financial organizations (e.g. VC and PE firms).

Information on individual investors was enriched by a manual search on the web. We scrutinized investors' personal sites and LinkedIn and collected details such as location (continent, country, state (for US investors), and city), birthplace, sex, number of LinkedIn contacts, investment experience (i.e. information on companies invested in the past, year of first investment, total number of years of investment experience), educational background (i.e. highest degree obtained: Bachelor's, Master's, PhD), entrepreneurial experience (i.e. whether he/she founded a start-up and information on the start-ups funded), sector of specialization, and actual and past job positions. Finally, we collected Hofstede's cultural measures associated with the countries of the invested companies and BAs.

3.2 Sample description

We restricted the analysis to companies that reported to have received, in their first investment round, at least one financing by an individual investor (i.e. we excluded deals originating from only

⁷ See Dalle et al. (2017) for an overview of the most recent scholarly works exploiting the dataset.

financial organizations or companies). The same approach was followed by Croce et al. (2018). We then dropped those investments with unknown information about the investor and/or location of the company. Given the focus of our analysis, we kept all US and European BAs; however, start-ups could be located anywhere in the world. The final dataset consists of 7,503 companies that received at least one financing from a BA. The sample is composed of 14,572 deals by 8,263 BAs financing the first round in 7,503 companies. We refer from now onwards to “deals” (or “investments” interchangeably) rather than “rounds” in terms of unit of observation, since many rounds are syndicated. This means there are multiple “deals” in a syndicated “round”, as each BA’s investment is considered as a separate unit of observation in the database. Table 1 provides a breakdown of the number of deals by investment year. Only 3.12% of the financing deals in the sample occurred before 2007. This is driven by the fact that Crunchbase coverage has increased significantly over time.

[Insert Table 1 here]

Table 2 reports the distribution of the invested companies by geographical area. The vast majority of the companies are located in North America (nearly 70%), followed by Europe (more than 26%). In Europe, the United Kingdom accounts for 661 companies (33.79% of European companies), followed by France (11.40%), Germany (8.13%), Sweden (7.57%), and Spain (7.31%).

[Insert Table 2 here]

Table 3 provides the distribution of our BA sample by geographical area. Of the 8,263 BAs, 5,953 (72.04%) individuals are from the US, while the remaining 2,310 (27.96%) come from European countries. A similar distribution is obtained when breaking down the deals by the country of the

investors involved: 11,068 deals out of the 14,572 (75.95%) relate to US BAs⁸, while European BAs are involved in the remaining 3,504 deals (24.05% of the sample).

[Insert Table 3 here]

Table 4 reports the number of cross-country deals and their percentage incidence in the sample: on average, in our sample, 2,328 (15.98%) out of 14,572 deals relate to cross-border investments. US BAs tend to show a lower propensity towards international investments: only 10.52% of US angel deals are cross-country compared with 33.22% for European BAs. Moreover, US BAs invest mainly in Europe (45.02% of cross-border deals), particularly in UK (16.41%), followed by Canada and India (15.38% and 12.37%, respectively). The distribution of cross-border deals by European BAs is dominated by North American companies, which represent 49.57% of European cross-border deals, while 41.92% are devoted to other European countries (mainly UK (10.05%) and Germany (4.12%)).

[Insert Table 4 here]

Table 5 defines the variables used in the empirical analysis. As our dependent variables, we first used a dummy to indicate international deals: d_cross takes value 1 if the company and the BA belong to a different country, and 0 otherwise. For cultural distance, we used Dai and Nahata's (2016) measure to estimate the Cartesian distance measured along Hofstede's six original cultural dimensions for the two countries involved (i.e. company and BA country). We used the differences in Hofstede's measures of the six dimensions of the culture of a society to capture the cultural distance between countries⁹. The variable *Cult_distance* is the log of this measure.

⁸ In the sample of US BAs, if we consider the different US states in which BAs are located, of the 5,953 US BAs, 43.36% come from California followed by New York (17.27%). Similar percentages are found when investment deals are considered. This is not surprising given that high-tech, high-growth start-ups are typically located there, where most VCs and BAs operate and where investor networks are predominantly concentrated (Hochberg et al., 2007).

⁹ We resorted to the cultural distance construct largely employed in international business studies (Kogut and Singh, 1988).

As for angel characteristics, which we predict to influence BAs' propensity to internationalize their investments, we considered both investment and entrepreneurial experience. We measured investment experience by resorting to the number of companies (in logs) invested in by the focal BA (*Investment_exp_comp*) in the years before the deal¹⁰. As additional evidence, following Cumming and Dai (2010), we resorted, as a robustness check, to two additional proxies of investment experience: we used the number of companies (in logs) previously invested in by the focal BA that went through an IPO (*Investment_exp_IPO*) and the number of previous rounds co-invested with VC investors (*Investment_exp_synd*), as to better qualify the investment ability of a BA. As to the measure of entrepreneurial experience, we adopted the number of founded start-ups (in logs) by the focal BA (*Entrepreneurial_exp*) in the years before the deal¹¹.

Moreover, in later analyses, we also distinguished between past experiences in cross-border and domestic domains for both investment and entrepreneurial experiences. Accordingly, we proxied investment experience by resorting to two different variables: *Investment_exp_comp_cross*, indicating the number of companies invested in the past in foreign countries and *Investment_exp_comp_domestic*, indicating the number of companies invested in the past operating in the same country of the focal BA. Similarly, for entrepreneurial experience, we introduced two different variables (*Entrepreneurial_exp_cross* and *Entrepreneurial_exp_domestic*) indicating the number of start-ups (in logs) previously founded in a foreign country and in the same country of the focal BA.

¹⁰ Given that a BA may perform more than one investment in the same company, as a robustness check, we also used the number of investments by the focal BA as a proxy of investment experience. The results, confirming our principal analysis, are not reported for the sake of brevity but are available from the authors upon request.

¹¹ As a robustness check, we also measured entrepreneurial experience using two alternative dummies: the first taking 1 if the BA has entrepreneurial experience (i.e., he/she founded a company before the investment) and the second, using a more stringent definition, taking 1 if the BA is a serial entrepreneur (i.e., he/she founded more than one company before the investment). Again, the results confirm our main findings and are available from the authors upon request.

Table 6 presents the summary statistics of the variables (the correlation matrix is reported in Table A1 in the Appendix) for the full sample of 14,572 BA deals.

[Insert Tables 5 and 6 here]

Table 7 shows preliminary evidence of the role played by BAs' experience on the internationalization of their investments. We report the percentage of cross-border deals and the mean value of cultural distance at different levels of BAs' investment and entrepreneurial experience. H1 proposes that experience reduces BAs' local bias, increasing their propensity to invest in a foreign environment (Cumming and Dai, 2010). Indeed, we assume that experience leads to a reduction in local bias because it affects BAs' appetite and capability to bridge geographical boundaries: more experienced investors have accumulated knowledge that enables them to benefit from reduced information asymmetry also in foreign, distant markets. However, the descriptive statistics in Table 7 indicate an ambiguous trend between (investment and entrepreneurial) experience and both the probability of cross-border deals and cultural distance of investments. This suggests that other factors may be at play, given the strong heterogeneity in BAs. One of these factors is geographical location.

[Insert Table 7 here]

As we theorize in Section 2.2, these impacts might not be equally generalizable to the US and Europe, where investment and entrepreneurial experience might affect the propensity of BAs to internationalize their investments with different degrees of intensity, as stated in H2, consistently with the cognitive perspective of institutional theory (Bruton et al., 2005). This perspective suggests that countries differ in both the value they place on entrepreneurship, risk-taking and individual action.

Before exploring whether investment and entrepreneurial experience exert a differential effect on the propensity of BAs to internationalize their investment strategy, Table 8 reports the descriptive statistics of the variables used in our analysis separately for US and European BAs to explore the

differences among the two subsamples of BAs and their investments. As illustrated in the final column, US BAs show a significantly less favourable attitude towards investing across borders (as stated before, only 10.05% of deals by US angels relate to cross-border investments compared with 33.22% by European investors). Similarly, US investors seem to invest in countries with a lower cultural distance from their own country: the mean value of cultural distance is 0.525 for US investors compared with 1.846 for European ones. This result reflects the previous descriptive evidence, as the majority of US cross-country deals are towards UK and Canadian companies, which are culturally close to the US.

US investors show a significantly higher investment and entrepreneurial experience than European ones and the differences are statistically significant at the 1% level for both the types of experience (i.e. entrepreneurial and investment) and whatever the proxy used to measure investment experience. However, it is interesting to notice that, when we disentangle investment and entrepreneurial experience in their components (i.e. cross and domestic), results of descriptive statistics in Table 8 suggest that US BAs have a significantly higher experience in investing in domestic companies and in founding start-ups in their own countries, while the opposite is true when international experience is taken into account. European BAs show a higher propensity both in investing in international companies and in founding companies abroad. A significantly lower percentage of US BAs are men, even though the difference is marginal in economic terms (95.7% of US BAs are men compared with 93.1% of European ones). US BAs also tend to invest in younger companies than European investors.

As to the deal characteristics, the likelihood that VC funds co-invest with BAs in the round is greater for US BAs than for European investors. The difference is statistically significant at the 5% level. In general, the number of co-investors for US BAs is significantly higher than that for European investors and the same holds for the amount invested in the round that, for US BAs, is significantly higher than for European ones.

[Insert Table 8 here]

To provide some initial evidence for H2, Table 9 reports the same descriptive statistics provided in Table 7 on the effect of investment and entrepreneurial experience on the internationalization of BA investments, separately for US and European BAs. The results in Table 9 show that the effect of experience is actually different for US and European BAs. As their investment and entrepreneurial experience increases, European BAs tend to invest more in cross-border deals and at a higher cultural distance, while no clear patterns emerge for US BAs: initially, the higher their experience, the lower the cultural distance of their investments and the lower the incidence of cross-border deals; then, the trend is reversed in the last percentiles of experience. To better explore these preliminary descriptive statistics, we tested our research hypotheses in the econometric analysis shown in the next section.

[Insert Table 9 here]

4. Empirical analyses

4.1 Role of experience on the internationalization of BA investments

In the empirical analysis, we estimated two econometric models (probit and ordinary least squares (OLS) regressions) to investigate the effects of BAs' characteristics on the probability of making cross-border investments and on the cultural distance of their investments. Table 10 shows the results of estimates aiming to test H1: in the first column, the dependent variable is a dummy indicating whether it is a cross-border deal, while the second column reports the results related to cultural distance. For the control variables, we included d_US to indicate whether the investor is from the US; the number of co-investors in the round (in logs); a dummy variable indicating that the BA is co-investing with a VC fund; the amount (in logs) invested in the specific round, a dummy indicating if the BA is male; and the age of the invested company. Company industry dummies,

company country dummies, and year dummies (i.e. the year in which the financing round was received) were also included as controls.¹²

[Insert Table 10 here]

Results show that BA investment and entrepreneurial experiences have a positive and significant effect on both the probability of investing in cross-border deals and on the cultural distance of investments, thus supporting our hypothesis H1. In other words, results suggest that, on average, experience makes BAs more discerning of cross-border investment opportunities and significantly favours BAs' attitude towards managing international deals. Thus, experience reduces the local bias.

As to the control variables, d_{US} is negative and significant, meaning that US angels show, on average, a lower probability of investing abroad than European ones. This result is in line with the descriptive statistics in Table 8. Moreover, as to the amount invested in the round, estimates indicate that, when going abroad or at a higher cultural distance, the amount invested is significantly higher. The other control variables do not seem to significantly influence the probability of investing in cross-border deals and the cultural distance of investments.

4.2 Role of experience on the internationalization of BA investments: differences between US and European BAs

In Table 11, we report estimates in which we interact the dummy (d_{US}) indicating whether the BA is from the US with the variables used as proxies of BAs' experience. The aim of this analysis is to test whether the intensity by which experience (both entrepreneurial and investment experience)

¹² As a robustness check, we also included a dummy variable indicating whether the BA has a Master-level education. This information is however only available for a limited number of BAs, leading to a significant reduction in sample size. Results, which are in line with those discussed in the empirical analyses section, are not reported in the text for the sake of brevity, but are available from the authors upon request.

reduces the local bias and increases BAs' propensity to internationalize depends upon the context under scrutiny, as summarized in Hypothesis H2.

Interesting results emerge from these models: when we separate US and European BAs, a clearer picture of the role of experience appears. European BAs are more likely to make cross-border deals and invest at a greater cultural distance when they have higher experience. In other words, when going abroad, the higher the investment and entrepreneurial experience of a European BA, the higher his/her attitude towards risk, proxied by the distance of the companies in which he/she decides to invest. When US BAs are considered, a difference from European BAs clearly emerges, as the coefficient of the interacted variable is negative and significant at the 1% level in both model specifications, supporting H2. Further, unreported tests indicate in fact that the effect is not only weaker in the US but also not statistically significant anymore. This leads to the conclusion that the effect only holds for European BAs.

We interpret these results by considering that in the US, where the culture of risk-taking is encouraged, BAs do not rely as heavily on experience to overcome the local bias and the uncertainty involved in cross-border deals as European investors do (Bruton et al., 2005; Busenitz et al., 2000). Instead, for European investors, experience plays a more crucial role in overcoming local bias in investing.

[Insert Table 11 here]

4.3 Role of experience on the internationalization of BA investments: differences between cross-border and domestic experience

In this section, we report extra tests to provide further support to our analysis. In particular, we split our experience variables into two components, indicating whether the BA experience was made internationally or domestically.

To this end, we replaced the investment experience variable (*Investment_exp_comp*) with two different variables (i.e. *Investment_exp_comp_cross* and *Investment_exp_comp_domestic*) indicating the number of previous companies invested by the focal BA in cross-border and local deals, respectively. Similarly, the *Entrepreneurial_exp* variable was replaced by two different variables (i.e. *Entrepreneurial_exp_cross* and *Entrepreneurial_exp_domestic*) indicating the number of start-ups previously founded by the focal BA, respectively, in foreign countries and in the same country of the BA.

Results of these estimates are reported in Table 12. Columns I and II report results on the probability to invest abroad, while columns III and IV refer to estimates using cultural distance as dependent variable. The first column of each dependent variable refers to the baseline models, while the second column considers the models with interactions with *d_US*. Estimates suggest that it is the investment experience abroad that effectively plays a positive and significant role in influencing the probability to make international deals. In fact, the coefficient of *Investment_exp_comp_cross* is positive and significant. When considering the model with interactions, our results are confirmed: while for European BAs, the higher the investment experience abroad, the higher the probability to make cross border deals and to invest at a higher cultural distance, for US BAs this effect is significantly reduced. The effect for domestic investment experience is, instead, negative and significant, this confirming the role of local bias in influencing the investment choice of BAs: the higher the experience in local deals, the lower the effect on the internationalization strategy of BAs. Again, this effect is reduced for US investors. Overall, results suggest that international and domestic investment experience affect local bias differently, with the first reinforcing the likelihood to invest abroad and the second reducing it. More cross-border investment experience reduces the informational disadvantage relative to domestic investments, in line with Hypothesis 1. In a similar vein, more domestic investment experience generates greater benefits for next domestic investments relative to foreign investments, through further learning, and this reinforces the local bias.

As to entrepreneurial experience, results suggest a similar pattern, even though the significance is reduced. We explain this lower significance by considering that, in our sample, the number of start-ups invested abroad, as shown in Table 5, is very low. In fact, 87.04% of European sample deals refer to BAs not founding start-ups abroad. This percentage is significantly higher in the sample of US BAs (95.82% of our sample). These numbers do not allow us to detect significant differences in the role played by entrepreneurial experience in international and domestic domains.

[Insert Table 12 here]

4.4 Role of experience on the internationalization of BA investments: alternative proxies for investment experience

In this section, we report additional evidence to provide further support to our analysis. More specifically, we resorted to different proxies for investment experience as to provide a more complete picture of this variable. As described in Section 3, we resorted to other two additional proxies: we used the number of companies (in logs) previously invested in by the focal BA that went through an IPO (*Investment_exp_IPO*) and the number of previous rounds co-invested with VC investors (*Investment_exp_synd*) as to better qualify the investment ability of a BA. Results of these estimates are reported in Table 13. For each dependent variable, we resorted to *Investment_exp_IPO* (Columns I-II and V-VI) and *Investment_exp_synd* (Columns III-IV and VII-VIII). Columns I-IV report results on the probability to invest abroad, while columns V-VIII refer to estimates using cultural distance as dependent variable. The first column of each dependent variable refers to the baseline models (H1), while the second column considers the models with interactions with d_{US} (H2). Estimates confirm that our results hold whatever the proxy used for BAs' experience: both investment and entrepreneurial experience play a positive and significant role on the internationalization strategy for European angels (confirming H1), while for US ones, the interaction is negative and significant, in line with our H2.

[Insert Table 13 here]

5. Implications and concluding remarks

A central argument in much of the research on international finance is that the unequal distribution of information in international financial markets is related to transaction costs that drive investment decisions and that determine the “local bias” in investors’ investment attitudes (Coval and Moskowitz, 1999; 2001; Ivkovicz and Weisbenner, 2005). The increase in the globalization of financial markets is deemed to contribute to reduce the “local bias” and possibly foster cross-border investments (Chan et al., 2005). Similar trends may be expected from BA investing, which has been referred to as a global phenomenon (Harrison, 2017; Lo, 2016; May and Liu, 2016). In this study, we examine the extent to which prior individual experience of BA investors (whether as investor or entrepreneur) helps overcome local biases.

Consistent with our predictions based upon the local bias (Chan et al., 2005; Coval and Moskowitz, 1999; 2001; Cumming and Dai, 2010; Ivkovicz and Weisbenner, 2005) and institutional theory frameworks (Bruton et al., 2005), we find that both types of experience help reduce the local bias associated with cross-border and more culturally distant deals, especially for European BAs. The knowledge accumulated from prior investments and prior entrepreneurial experience facilitates cross-border and culturally distant deals, with the effect however being weaker for US angels. We interpret these results in light of the reduced risk aversion of US BAs that lowers transaction costs. When splitting experience into domestic and foreign, we find that the former increases while the latter decreases the local bias. This suggests that it matters *where* the experience is made.

Our study offers several contributions to the stream of international business studies, by developing the base-line argument that investors’ experience matters to approach and manage international deals. On the theoretical forefront, we extend the local bias hypothesis towards distinguishing between investment and entrepreneurial experience (i.e., types of experience), and add

insights by disentangling between domestic and cross-border experience (i.e., location of experience). Existing studies have explored the impact of experience in the context of VC financing (e.g. Cumming and Dai, 2020). The novelty in our study resides in the different dimensions of experience we examine, as well as in the consideration of the investment attitude and degree of involvement in cross-border investment activities of players in the early stage market other than venture capitalists. In the case of business angels, the distinction between investment and entrepreneurial experience is crucial, since business angels have often been entrepreneurs themselves before coming investor. We derive predictions for the local bias by exploiting this distinction with venture capitalists. Our study highlight the importance of distinguishing the two types of experiences when studying cross-border investment decisions.

Another important extension from the general literature on local bias is the fact that our investors are generally active (unlike investors in the public markets), which makes the distinction between domestic versus foreign experience-but also investment versus entrepreneurial experience-a novel angle to study. The main reason why local bias is likely different for active investors is because they do not only need better information (i.e., to solve the information asymmetry problems) but also resources to assist start-ups. Cumming and Dai (2020) have not studied this issue in such details for the VC setting.

In a similar vein, we extend the institutional theory of investment towards the same lines of inquiry (i.e., considering different experience types). We contribute theoretically by deriving a prediction on how the previous relationships with local bias are affected by institutional differences that we empirically capture by studying European and US BAs separately. Extending the institutional framework in that form for explaining local investment biases is new in the literature.

Our findings offer several practical implications for investors and entrepreneurs. For the former, our study shows the importance of investment and entrepreneurial experience in overcoming the local bias in investments. Investment and entrepreneurial experience are crucial since they imply

that the way in which someone has become a BA determines whether he/she will internationalize activities once he/she becomes an investor. BAs that were formerly successful entrepreneurs, as well as those who acquired experience through investments and deal making, may expand internationally more. At the same time, our study indicates that the location where this experience is made (whether domestically or internationally) affects the relative gains for overcoming the local bias. In fact, increased domestic experience may reinforce the local bias and lead experienced investors to increasingly specialize in domestic deals. Others who have accumulated diverse experiences (both domestically and internationally) may be diversifying even more cross-border in the future. In practice, such experience may be gained through syndication with international investors for BAs able to access such networks. Eventually, one might see a movement towards specialization among BAs between locally-active investors and more internationally-oriented ones. Being able to invest internationally offers benefits, since it expands the set of investment opportunities. While this may increase the quality of deal flows, it also increases the diversification gains. Our findings suggest that these characteristics matter more for European than for US investors. In the US, having entrepreneurial and investment experience enhances opportunities for foreign deals to a lower extent than in Europe. Instead, European BAs can alleviate the uncertainty associated with cross-border and culturally distant deals by means of their greater investment and entrepreneurial experience.

For entrepreneurs, our study highlights that a number of characteristics are needed to attract foreign BAs as investors. Given the time and effort needed to reach investors, entrepreneurs need to evaluate their level of experience before approaching foreign investors, as less experienced investors are unlikely to invest abroad. Moreover, our findings suggest that the internationalization of BAs' investments is likely to continue to grow as BAs accumulate more investment and entrepreneurial experience over time. Indeed, when making international deals, BAs expand their knowledge and contacts, which they may use when investing in entrepreneurial start-ups in the future. Doing so can help entrepreneurs even more in future years. Companies in need of internationalization may benefit

the most from investors' experience and contacts since investors with international experience (either as former entrepreneurs or as investors) are better positioned to advise entrepreneurs on issues related to the internationalization of their activities. However, companies in Europe and the US may benefit differently, given that BAs make different types of cross-border deals and thus acquire different levels of experience.

Our study offers several avenues for future research. The first is how syndication can help acquire investment experience in international deals. In particular, this may help less experienced BAs and newcomers acquire the experience needed to internationalize more quickly and thereby expand their deal flows. Whether and how international syndication can be beneficial in the same way as for VC investments (Khurshed et al., 2020; Ter Wal et al., 2016) remains to be investigated for BAs to fully understand the learning mechanisms at play to overcome the local bias. Moreover, what leads foreign investors to invite those lacking overseas investment experience to join?

Another interesting avenue is whether and how the international migration of BAs affect the impact of the entrepreneurial experience of investors. Our findings highlight the importance of domestic and cross-border experience, which affects international investments differently. When a BA moves to another country or even region (e.g., from London to Silicon Valley), does he/she lose the local advantage in his/her former country? This previously local access to deal flows may continue to prevail but become international. This in turn may affect how prior experience affects local bias in future investment. All these issues can be addressed in future research.

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Tables and Figures

Figure 1. Conceptual framework

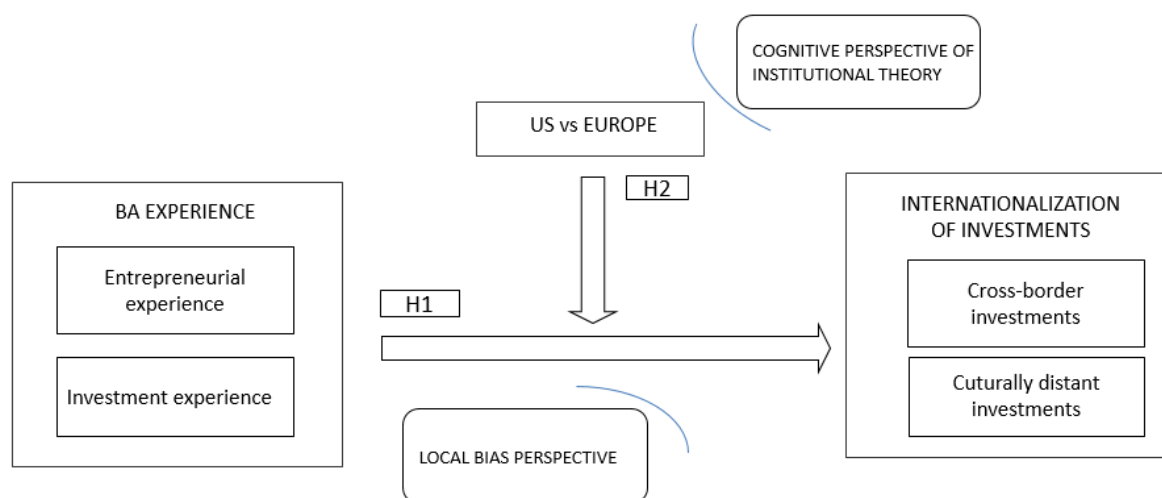


Table 1. Distribution of BA deals by investment year

Investment year	No. of deals	% of sample
Before 2007	455	3.12%
2007	171	1.17%
2008	297	2.04%
2009	261	1.79%
2010	431	2.96%
2011	824	5.65%
2012	1,066	7.32%
2013	1,460	10.02%
2014	1,706	11.71%
2015	1,838	12.61%
2016	1,642	11.27%
2017	1,518	10.42%
2018	1,622	11.13%
2019	1,281	8.79%
Total	14,572	100.00%

Table 2. Distribution of invested companies by geographical area

Continent	No. of invested companies	% of sample
Asia	238	3.17%
Europe	1,956	26.07%
North America	5,213	69.48%
South America	54	0.72%
Oceania	42	0.56%
Total	7,503	100.00%

Table 3. Distribution of BAs by continent: Number (and %) of deals and BAs

Continent	Deals		BAs	
	N.	%	N.	%
Europe	3,504	24.05%	2,310	27.96%
United States	11,068	75.95%	5,953	72.04%
Total	14,572	100.00%	8,263	100.00%

Table 4. Internationalization of BAs' investment activity

	Total deals	Company continent	Cross-border deals	% of total deals	% of cross-border deals
Total sample	14,572	Total	2,328	15.98%	
US BAs	11,068	Total	1,164	10.52%	
		Asia	236		20.27%
		Europe	524		45.02%
		North America	308		26.46%
		Oceania	48		4.12%
		South America	48		4.12%
European BAs	3,504	Total	1,164	33.22%	
		Asia	71		6.10%
		Europe	488		41.92%
		North America	577		49.57%
		Oceania	20		1.72%
		South America	8		0.69%

Table 5. Description of the variables used in the empirical analysis

<i>Variable</i>	<i>Description</i>
Distance measures	
d_cross	Dummy taking 1 if the company and the BA belong to a different country.
Cult_distance	Cultural distance is estimated, following Dai and Nahata (2016), as the Cartesian distance measured along Hofstede's six original cultural dimensions for the two countries (i.e. company and BA country). Expressed in logs.
Experience measures	
Investment_exp_comp	Number of companies (in logs) invested in the past by the BA.
Investment_exp_IPO	Number of companies (in logs) invested in the past by the BA that went through an IPO.
Investment_exp_synd	Number of rounds (in logs) co-invested in the past by the BA with VC investors.
Investment_exp_comp_cross	Number of companies (in logs) operating in a foreign country invested by the BA prior to the investment.
Investment_exp_comp_domestic	Number of companies (in logs) invested in the past by the BA and operating in the same country of the BA prior to the investment.
Entrepreneurial_exp	Number of companies (in logs) founded by the focal BA prior to the investment.
Entrepreneurial_exp_cross	Number of companies (in logs) founded by the focal BA in a foreign country prior to the investment.
Entrepreneurial_exp_domestic	Number of companies (in logs) founded by the focal BA in the same country in which the BA operates prior to the investment.
Control variables	
Investor_US	Dummy taking 1 if the BA is located in the United States at time of the investment.
N_investors	Number of investors for a specific financing round (in logs).
VC	Dummy taking 1 if a VC is co-investing in the company with the BA at the time of the investment.
Amount_invested	Total amount invested by all investors in the specific financing round (in logs).
Company_age	Age of the company at the time of the investment (in logs).
Male	Dummy taking 1 if the BA is a man.

Table 6. Descriptive statistics of the variables used in the empirical analysis

	<i>Variable</i>	<i>Mean</i>	<i>St. dev.</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>	<i>No. obs.</i>
1	d_cross	0.160	0.366	0	0	1	14,572
2	Cult_distance	0.843	1.991	0	0	7.117	14,572
3	Investment_exp_comp	1.592	1.052	1.099	0.693	5.485	14,572
4	Investment_exp_IPO	0.057	0.228	0	0	1.792	14,518
5	Investment_exp_synd	1.644	1.304	1.386	0	5.236	14,572
6	Investment_exp_comp_cross	0.261	0.558	0	0	4.043	14,572
7	Investment_exp_comp_domestic	1.456	1.108	1.099	0	5.268	14,572
8	Entrepreneurial_exp	0.660	0.611	0.693	0	2.890	14,572
9	Entrepreneurial_exp_cross	0.050	0.208	0	0	2.833	14,143
10	Entrepreneurial_exp_domestic	0.625	0.609	0.693	0	2.639	14,143
12	Investor_US	0.760	0.427	1	0	1	14,572
13	N_investors	1.832	0.657	1.792	0.693	3.738	14,572
14	VC	0.720	0.449	1	0	1	14,572
15	Amount_invested	1.097	0.873	0.916	0.001	7.313	14,572
16	Company_age	0.854	0.638	0.693	0	4.691	14,572

Note: The table reports the descriptive statistics (mean, standard deviation, median, min, max, and number of observations) of the variables used in the study.

Table 7. Role of BAs' experience in internationalization

Quartile	% of cross-border deals for each quartile	Average Cult_distance for each quartile
Investment experience (<i>Investment_exp_comp</i>)		
1st	16.31	0.868
2nd	16.45	0.848
3rd	16.12	0.853
4th	15.02	0.788
Entrepreneurial experience (<i>Entrepreneurial_exp</i>)		
1st	15.98	0.848
2nd	17.10	0.890
3rd	13.71	0.735
4th	15.99	0.844

Note: The table reports the descriptive statistics of the role of investment and entrepreneurial experience in BAs' internationalization strategy. The numbers refer to the percentage of cross-border deals and average cultural distance at the different percentiles of BAs' investment and entrepreneurial experience.

Table 8. Descriptive statistics: US and European BAs

Variable	US BAs						European BAs						Difference in mean US vs European BAs	
	Mean	St. dev.	Median	Min	Max	No. obs.	Mean	St. dev.	Median	Min	Max	No. obs.		
d_cross	0.105	0.307	0.000	0.000	1.000	11,068	0.332	0.471	0.000	0.000	1.000	3,504	-0.227	***
Cult_distance	0.525	1.597	0.000	0.000	7.117	11,068	1.846	2.665	0.000	0.000	7.086	3,504	-1.321	***
Investment_exp_comp	1.675	1.103	1.386	0.693	5.485	11,068	1.331	0.817	1.099	0.693	4.605	3,504	0.344	***
Investment_exp_IPO	0.071	0.253	0.000	0.000	1.792	11,023	0.012	0.103	0.000	0.000	1.609	3,495	0.059	***
Investment_exp_synd	1.787	1.349	1.609	0.000	5.236	11,068	1.191	1.027	1.099	0.000	4.078	3,504	0.596	***
Investment_exp_comp_cross	0.179	0.460	0.000	0.000	3.871	11,068	0.521	0.733	0.000	0.000	4.043	3,504	-0.342	***
Investment_exp_comp_domestic	1.598	1.142	1.099	0.000	5.268	11,068	1.008	0.853	0.693	0.000	4.419	3,504	0.590	***
Entrepreneurial_exp	0.699	0.618	0.693	0.000	2.708	11,068	0.539	0.570	0.693	0.000	2.890	3,504	0.160	***
Entrepreneurial_exp_cross	0.033	0.162	0.000	0.000	1.609	10,793	0.108	0.307	0.000	0.000	2.833	3,350	-0.075	***
Entrepreneurial_exp_domestic	0.679	0.619	0.693	0.000	2.639	10,793	0.452	0.540	0.000	0.000	2.398	3,350	0.227	***
Investor_US	1.000	0.000	1.000	1.000	1.000	11,068	0.000	0.000	0.000	0.000	0.000	3,504	1.000	***
N_investors	1.912	0.663	1.946	0.693	3.738	11,068	1.579	0.568	1.609	0.693	3.714	3,504	0.333	***
VC	0.756	0.430	1.000	0.000	1.000	11,068	0.606	0.489	1.000	0.000	1.000	3,504	0.150	**
Amount_invested	1.174	0.885	0.993	0.001	7.313	11,068	0.852	0.786	0.648	0.001	6.746	3,504	0.322	***
Company_age	0.845	0.637	0.693	0.000	4.691	11,068	0.882	0.640	0.693	0.000	3.466	3,504	-0.037	***
Male	0.931	0.253	1.000	0.000	1.000	11,068	0.957	0.204	1.000	0.000	1.000	3,504	-0.025	***

Note: The table reports the descriptive statistics (mean, standard deviation, median, min, max, and number of observations) of the variables used in the study for the subsamples of US and European BAs. The last column reports a t-test based on the difference between means. ***, **, and * indicate, respectively, significance levels of <1%, <5%, and <10%.

Table 9. Role of BAs' characteristics in internationalization (US and European BAs)

Quartile	US BAs		European BAs	
	% of cross-border deals	Cultural_distance	% of cross-border deals	Cultural distance
<i>Investment experience (Investment_exp_comp)</i>				
1st	11.24	0.564	29.07	1.631
2nd	11.23	0.555	31.78	1.734
3rd	8.81	0.436	34.32	1.901
4th	10.18	0.510	42.00	2.329
<i>Entrepreneurial experience (Entrepreneurial_exp)</i>				
1st	10.84	0.544	28.72	1.600
2nd	11.17	0.547	28.90	1.688
3rd	8.91	0.453	34.25	1.880
4th	10.30	0.518	40.41	2.268

Note: The table reports the descriptive statistics of the role of investment and entrepreneurial experience in BAs' internationalization strategy. The numbers refer to the percentage of cross-border investments and average cultural distance at different percentiles of BAs' investment and entrepreneurial experience for the two subsamples of US and European BAs.

Table 10. BAs' experience and internationalization strategy

	Cross-border deals		Cultural distance	
Investment_exp_comp	0.041	**	0.044	***
	(0.017)		(0.015)	
Entrepreneurial_exp	0.071	***	0.068	***
	(0.027)		(0.025)	
d_US	-0.810	***	-1.085	***
	(0.077)		(0.166)	
N_investors	0.003		0.012	
	(0.04)		(0.037)	
VC_backed	0.015		0.032	
	(0.05)		(0.049)	
Amount_invested	0.084	***	0.071	***
	(0.022)		(0.022)	
Male	0.119	*	0.077	
	(0.066)		(0.049)	
Company_age	-0.012		-0.01	
	(0.028)		(0.026)	
Const.	-1.244	***	7.400	***
	(0.152)		(0.207)	
Company industry dummies	Yes		Yes	
Company country dummies	Yes		Yes	
Year dummies	Yes		Yes	
No. obs.	14,226		14,572	

Note: The table reports probit and OLS estimates. The dependent variables are respectively *d_cross* (Column I) and *Cult_distance* (Column II). Table 5 defines the dependent and independent variables. For the sake of brevity, we do not report the estimated coefficients for the year, company industry, or company country dummies. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table 11. BAs' experience and internationalization strategy: US versus European BAs

	Cross-border investments		Cultural distance	
Investment_exp_comp	0.133	***	0.269	***
	(0.035)		(0.066)	
Investment_exp_comp*d_US	-0.122	***	-0.254	***
	(0.039)		(0.067)	
Entrepreneurial_exp	0.190	***	0.364	***
	(0.048)		(0.09)	
Entrepreneurial_exp *d_US	-0.207	***	-0.383	***
	(0.058)		(0.093)	
d_US	-0.500	***	-0.487	**
	(0.099)		(0.194)	
N_investors	0.009		0.020	
	(0.04)		(0.037)	
VC_backed	0.005		0.016	
	(0.049)		(0.049)	
Amount_invested	0.085	***	0.074	***
	(0.023)		(0.022)	
Male	0.114	*	0.071	
	(0.065)		(0.048)	
Company_age	-0.015		-0.013	
	(0.028)		(0.026)	
Const.	-1.454	***	6.883	***
	(0.159)		(0.228)	
Company industry dummies	Yes		Yes	
Company country dummies	Yes		Yes	
Year dummies	Yes		Yes	
No. obs.	14,226		14,572	

Note: The table reports probit and OLS estimates. The dependent variables are respectively *d_cross* (Column I) and *Cult_distance* (Column II). Table 5 defines the dependent and independent variables. For the sake of brevity, we do not report the estimated coefficients for the year, company industry, or company country dummies. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Table 12. BAs' experience and internationalization strategy: cross-border versus domestic experience

	Cross-border investments		Cultural distance	
Investment_exp_comp_cross	1.499 ***	1.923 ***	1.580 ***	2.290 ***
	(0.05)	(0.103)	(0.042)	(0.081)
Investment_exp_comp_domestic	-0.570 ***	-1.070 ***	-0.341 ***	-1.258 ***
	(0.042)	(0.077)	(0.017)	(0.065)
Investment_exp_comp_cross*d_US		-0.670 ***		-1.257 ***
		(0.132)		(0.103)
Investment_exp_comp_domestic*d_US		0.736 ***		1.097 ***
		(0.092)		(0.068)
Entrepreneurial_exp_cross	0.147	0.247	0.489 ***	0.452 ***
	(0.102)	(0.184)	(0.096)	(0.164)
Entrepreneurial_exp_domestic	-0.021	-0.002	-0.020	0.014
	(0.038)	(0.079)	(0.021)	(0.078)
Entrepreneurial_exp_cross*d_US		-0.363		-0.067
		(0.231)		(0.191)
Entrepreneurial_exp_domestic*d_US		-0.050		-0.044
		(0.087)		(0.079)
d_US	-0.118	-0.383 ***	-0.194	-0.284 *
	(0.084)	(0.092)	(0.135)	(0.151)
N_investors	0.049	0.023	0.038	0.010
	(0.049)	(0.049)	(0.03)	(0.027)
VC_backed	0.066	0.092	0.064	0.080 **
	(0.055)	(0.057)	(0.039)	(0.036)
Amount_invested	0.061 *	0.034	0.052 ***	0.002
	(0.033)	(0.033)	(0.019)	(0.018)
Male	0.073	0.091	0.081 **	0.077 **
	(0.071)	(0.067)	(0.041)	(0.037)
Company_age	0.012	0.03	0.006	0.022
	(0.034)	(0.034)	(0.021)	(0.020)
Const.	-1.725 ***	-1.608 ***	5.079 ***	5.659 ***
	(0.180)	(0.182)	(0.185)	(0.177)
Company industry dummies	Yes	Yes	Yes	Yes
Company country dummies	Yes	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes	Yes
No. obs.	13,803	13,803	14,143	14,143

Note: The table reports probit and OLS estimates. The dependent variables are respectively d_{cross} (Column I) and $Cult_distance$ (Column II). Table 5 defines the dependent and independent variables. For the sake of brevity, we do not report the estimated coefficients for the year, company industry, or company country dummies. Standard errors are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 13. BAs' experience and internationalization strategy: Number of IPO and number of syndicated rounds as proxy of investment experience

	Cross-border investments							Cultural distance						
	Investment experience proxy: Investment_exp_IPO			Investment experience proxy: Investment_exp_synd				Investment experience proxy: Investment_exp_IPO			Investment experience proxy: Investment_exp_synd			
Investment_exp	0.031	1.074	***	0.029	**	0.147	***	0.034	1.669	***	0.035	***	0.299	***
	(0.064)	(0.246)		(0.015)		(0.03)		(0.051)	(0.437)		(0.012)		(0.054)	
Investment_exp*d_US		-1.140	***			-0.160	***				-1.682	***		-0.300
		(0.256)				(0.033)					(0.438)			(0.055)
Entrepreneurial_exp	0.094	***	0.240	***	0.074	***	0.159	***	0.094	***	0.474	***	0.070	***
	(0.026)		(0.045)		(0.027)		(0.048)		(0.024)		(0.086)		(0.025)	(0.091)
Entrepreneurial_exp*d_US			-0.244	***			-0.153	***			-0.482	***		-0.301
			(0.055)				(0.059)				(0.088)			(0.093)
d_US	-0.806	***	-0.624	***	-0.810	***	-0.483	***	-1.083	***	-0.751	***	-1.085	***
	(0.077)		(0.087)		(0.077)		(0.092)		(0.167)		(0.176)		(0.166)	(0.183)
N_investors	0.002		0.002		0.002		0.012		0.013		0.013		0.011	0.026
	(0.04)		(0.04)		(0.04)		(0.04)		(0.037)		(0.037)		(0.037)	(0.037)
VC_backed	0.034		0.037		0.001		-0.033		0.050		0.049		0.014	-0.036
	(0.049)		(0.049)		(0.051)		(0.051)		(0.049)		(0.049)		(0.051)	(0.050)
Amount_invested	0.093	***	0.090	***	0.084	***	0.087	***	0.079	***	0.078	***	0.071	***
	(0.022)		(0.023)		(0.022)		(0.023)		(0.022)		(0.022)		(0.022)	(0.022)
Male	0.120	*	0.114	*	0.120	*	0.114	*	0.078		0.075		0.078	0.072
	(0.066)		(0.065)		(0.066)		(0.065)		(0.049)		(0.048)		(0.049)	(0.048)
Company_age	-0.016		-0.016		-0.012		-0.016		-0.011		-0.013		-0.009	-0.015
	(0.028)		(0.028)		(0.028)		(0.028)		(0.026)		(0.026)		(0.026)	(0.026)
Const.	-1.214	***	-1.313	***	-1.208	***	-1.406	***	7.012	***	6.836	***	7.420	***
	(0.151)		(0.153)		(0.151)		(0.155)		(0.235)		(0.235)		(0.208)	(0.220)
Company industry dummies	Yes		Yes		Yes		Yes		Yes		Yes		Yes	Yes
Company country dummies	Yes		Yes		Yes		Yes		Yes		Yes		Yes	Yes
Year dummies	Yes		Yes		Yes		Yes		Yes		Yes		Yes	Yes

No. obs.	14,176	14,176	14,226	14,226	14,518	14,518	14,572	14,572
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Note: The table reports probit and OLS estimates. The dependent variables are respectively *d_cross* (Columns I-IV) and *Cult_distance* (Columns V-VIII). In columns I-II and V-VI the number of previous companies invested that went through an IPO is used as proxy of BA investment experience, while, in the remaining columns, the investment experience is proxied by the number of previous investment syndicated with VC funds. Table 5 defines the dependent and independent variables. For the sake of brevity, we do not report the estimated coefficients for the year, company industry, and company country dummies. Standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.10.

Appendix

Table A1. Correlation matrix of the variables used in the empirical analysis

Variable	1	2	3	4	5	6	7	8	9	10	12	13	14	15	16	17
1 d_cross	1															
2 Cult_distance	0.971 ***	1														
3 Investment_exp_comp	-0.015 *	-0.017 **	1													
4 Investment_exp_IPO	-0.029 ***	-0.025 ***	0.389 ***	1												
5 Investment_exp_synd	-0.042 ***	-0.043 ***	0.888 ***	0.385 ***	1											
6 Investment_exp_comp_cross	0.581 ***	0.573 ***	0.297 ***	0.127 ***	0.220 ***	1										
7 Investment_exp_comp_domestic	-0.244 ***	-0.243 ***	0.946 ***	0.374 ***	0.850 ***	0.033 ***	1									
8 Entrepreneurial_exp	-0.005	-0.005	0.391 ***	0.173 ***	0.426 ***	0.147 ***	0.365 ***	1								
9 Entrepreneurial_exp_cross	0.260 ***	0.266 ***	0.059 ***	0.033 ***	0.050 ***	0.359 ***	-0.056 ***	0.262 ***	1							
10 Entrepreneurial_exp_domestic	-0.069 ***	-0.070 ***	0.398 ***	0.179 ***	0.437 ***	0.078 ***	0.397 ***	0.971 ***	0.043 ***	1						
12 Investor_US	-0.265 ***	-0.284 ***	0.140 ***	0.111 ***	0.195 ***	-0.262 ***	0.228 ***	0.112 ***	-0.154 ***	0.159 ***	-0.150	1				
13 N_investors	-0.085 ***	-0.091 ***	0.187 ***	0.050 ***	0.293 ***	-0.029 ***	0.199 ***	0.088 ***	-0.031 ***	0.102 ***	-0.034	0.217 ***	1			
14 VC	-0.040 ***	-0.041 ***	0.252 ***	0.075 ***	0.423 ***	0.037 ***	0.248 ***	0.129 ***	-0.010	0.141 ***	0.000	0.142 ***	0.552 ***	1		
15 Amount_invested	-0.026 ***	-0.034 ***	0.206 ***	0.096 ***	0.232 ***	0.041 ***	0.196 ***	0.071 ***	-0.025 ***	0.081 ***	-0.003	0.158 ***	0.274 ***	0.320 ***	1	
16 Company_age	0.026 ***	0.019 **	0.063 ***	0.009	0.028 ***	0.039 ***	0.054 ***	-0.065 ***	-0.035 ***	-0.062 ***	0.041	-0.025 ***	-0.006	0.092 ***	0.337 *	1

Note: The table reports pair-wise correlations between the variables. ***, **, and * indicate, respectively, significance levels of <1%, <5%, and <10%.