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The Importance of Trust for Investment: Evidence from Venture Capital

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Abstract

We examine the effect of trust on financial investment and contracting decisions in a micro-economic environment where trust is exogenous. Using hand-collected data on European venture capital, we show that the Eurobarometer measure of trust among nations significantly affects investment decisions. This holds even after controlling for investor and company fixed effects, geographic distance, information and transaction costs. The national identity of venture capital firms' individual partners further contributes to the effect of trust. Education and work experience reduce the effect of trust but do not eliminate it. We also examine the relationship between trust and sophisticated contracts involving contingent control rights and find that, even after controlling for endogeneity, they are complements, not substitutes.

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"There are countries in Europe [...] where the most serious impediment to conducting business concerns on a large scale, is the rarity of persons who are supposed fit to be trusted with the receipt and expenditure of large sums of money." (John Stuart Mill)

Many economists intuitively recognize the importance of trust for economic transactions. Since Arrow's (1973) remark that "virtually every commercial transaction has within itself an element of trust" a small literature has analyzed the role of trust in economic decisions. For example, the work of Knack and Keefer (1997), Temple and Johnson (1998), and Zak and Knack (2001) establishes a positive relationship between trust and economic growth. More recently, Guiso, Sapienza and Zingales (2009) study the importance of trust for bilateral trade in goods, financial assets, and direct foreign investment, and Guiso, Sapienza and Zingales (2008) use Dutch and Italian data to establish an effect of trust on stock market participation.

In this paper we ask whether trust among nations affects the decision to make an investment across different countries. We also ask whether trust affects financial contracting and test whether trust and sophisticated contracts are substitutes or complements. We use deal level data on European venture capital investments, containing information on how venture capital firms across Europe invest in companies that may be located in the same or different countries. This unique hand-collected data allow us to study the effect of generalized trust on financial investments and contracts. Using individual transactions data also allows us to use a powerful fixed-effect identification strategy.

Following the social capital literature, we define trust as a subjective belief about the likelihood that a potential trading partner will act honestly. It is important to distinguish two different types of trust. Generalized trust pertains to the preconceptions that people of one identifiable group have for people from another identifiable group. Personalized trust, instead, concerns the evolving relationship between two specific agents. In this paper we focus solely on generalized trust, so that we are concerned with what might be considered cursory beliefs, generalizations about others, even stereotypes.

Our first question is whether generalized trust affects the likelihood that a venture capital firm will invest in a start-up company. Prior to investing, there is a search process where entrepreneurs vie for the attention of venture capitalists, which in turn, have to incur time and costs in screening potential deals. We hypothesize that higher trust facilitates this matching process. Moreover, we conjecture that in addition to the country location of the venture capital firm, also the nationality and personal characteristics of individual venture capital partners affect the trust relationship with entrepreneurs, and therefore the likelihood of investing.

Our second question concerns the effect of trust on contracting. We identify two contrasting views. The 'substitutes' hypothesis argues that sophisticated contracts can be used to overcome low trust between investors and entrepreneurs. The 'complements' hypothesis argues that investors make use of sophisticated contracts only when there is sufficient trust. The difference between the two hypotheses concerns investors' beliefs about contract enforceability. Under the substitutes hypothesis, enforcement is taken for granted, and investors trade-off costs versus benefits of using contractual sophistication: they make use of sophisticated contracts only in the absence of trust. By contrast, under the complements hypothesis, two parties do not find worthwhile to write a sophisticated contract if they have low trust in their counterparts' nation.

We examine these two questions in the context of venture capital investment and contracting decisions. Venture capital provides a particularly attractive testing ground for the effects of trust. On the one hand, one can reasonably argue that venture capitalists are sophisticated investors who would not act upon poorly-informed priors, and who are well positioned to exploit any arbitrage opportunities. On the other hand, one might counter that the financing of new companies inherently involves limited hard information, high (Knightian) uncertainty, and considerable scope for opportunistic behavior. Investors can therefore be more prone to rely on soft information, including social beliefs such as trust.

We use a hand-collected dataset on European venture capital investments made between 1998 and 2001 that contains investors and companies from 15 European countries (as well as companies from the US). The dataset contains detailed information that cannot be obtained from any commercially available database, including the experience, education and nationality of each venture capital partner and some features of the contracts used for financing. One of the advantages of using microeconomic data is that reverse causality can be safely dismissed: trust among nation can affect venture capital investments, but the venture capital industry is clearly too small to influence the trust among nations.

Given the inherently subjective nature of trust, it is appropriate to measure it by surveying opinions. We adopt the approach of Guiso, Sapienza and Zingales (2009) of using the Eurobarometer survey data of bilateral trust among nations. This measure is based on how much citizens of one country say they trust the citizens of each other European country (including their own).

We obtain three major findings. First, we find a positive effect of trust on investments. The effect is highly significant, both statistically and economically. Our econometric specification considers all potential deals between investors and companies in our sample and asks which deals are actually realized. We use both investor and company fixed effects, therefore accounting for any country-specific factors, such as regulation, taxes, institutions or country-specific investment opportunities. The fixed effects also take care of any systematic differences in the quality of investors or companies across countries, and for any differences in investors' attitudes towards risk. Therefore, the only variables that matter are *relative* (or *dyadic*) measures between the investor and the company. We distinguish two types of dyadic variables: those that vary at the country-pair level and those that vary at the individual investor-company pair level. The Eurobarometer measure of generalized trust is a country-dyadic variable. To isolate the effect of trust and eliminate alternative explanations we consider additional country-dyadic variables that control for differences in GDP, legal origin, language overlap, and the amount of information about foreign countries available in the business press. At the individual-dyadic level we control for the actual distance between the investor's and the company's town. We also control for the investor's propensity to invest in the company's stage and industry. To rule out alternative explanations we also use traditional controls, such as common borders, as well as some novel controls, such as a measure of taste-based preferences that is based on the Eurovision song contest. We also provide several robustness checks, including alternative ways of measuring trust.

Second, we find that the effect of trusts is not confined to the investor's country level. The inclusion of a foreign partner from the company's country in a venture capital firm' team is associated with an increases in the likelihood of investment. However, this could be due to the investor anticipating making deals in that country and hiring a local partner. More convincingly, we find that an investment also becomes more likely if the foreign partner is from a third country that has a higher level of trust in the company's countrymen than does the venture firm's country. In this case it seems less plausible that a foreign partner is hired in view of investing in a third country. We also examine the importance of venture partners' experience and educational achievements. While the trust effect is lower for partners who have previous US work experience or are more educated, it nonetheless remains positive and significant. This suggests that education and experience can mitigate but not eliminate the effect of trust.

Third, we find a positive and significant relationship between trust and contingent (i.e., sophisticated) contracts, consistent with the 'complements' hypothesis. This result holds true across a variety of contingent control rights, pertaining to the composition of the board of directors, the allocation of voting rights, the decision to liquidate the company's assets, and the ability to terminate the founders' employment contract. The results also continues to hold in a series of Heckman models that control for selection effects. To further validate the complements hypothesis, which considers contract enforcement a driving force for the choice of contracts, we examine how the effect of trust varies across legal enforcement regimes. We find that the effect of trust on contingent contracting is strongest when companies are located in countries with better legal enforcement.

We believe this paper is the first to examine the effect of generalized trust on corporate finance transactions. Our results are novel and relevant for several reasons. Identifying a trust effect in a micro-economic environment where alternative explanations can be controlled for is an important new step in establishing the importance of trust for investment decisions. Our results also suggest that generalized trust matters even in sophisticated financial transactions, where one might expect its effect to be eliminated by arbitrage. Moreover, the strength of this effect depends on individual investor characteristics. In particular, the result that the effect of trust is mitigated but not eliminated by the presence of partners with more experience or education suggests that sophistication alone is not enough to eliminate the effect of trust. The result that trust and contingent contracts are complements suggests that reliance on contracts need not be a solution to the problems that arise when investors question the enforceability of contracts in the first place. Generalized trust is therefore an important force not only for the likelihood that a transaction takes place, but also in shaping the contract which sustains the transaction.

Our paper contributes to the literature on the effects of trust on financial decisions. The paper most closely related to ours is Guiso, Sapienza and Zingales (2008), who document that trust affects the willingness to invest money in shares, and thus contribute to explaining limited participation in the stock market. We examine the decision to invest not by individuals who allocate their savings to liquid markets, but by sophisticated financial intermediaries that invest in illiquid companies. Our analysis goes beyond previous work by examining not only whether transactions occur, but also how they are structured.

By looking at cross-country investments, our paper also contributes to research on the 'home bias' investment puzzle (see Bae, Stulz and Tan (2008), Bottazzi, Pesenti, and van Wincoop (1996), French and Poterba (1991), and the survey by Karolyi and Stulz (2003)). Trust is one natural explanation for the home bias, but we want to make sure that our results do not simply reflect a home bias. We therefore examine whether the effect of trust continues to hold in a suitably defined subsample of foreign investments where trust can

be cleanly separated from home bias. We find that the effect of trust on investment clearly goes beyond home bias. For the effects of trust on contingent contracting, the evidence suggests that the domestic component of trust is somewhat stronger than the foreign one, although both effects matter for some contracting clauses.

Our paper makes a novel contribution to the venture capital literature. The paper addresses deal formation, an issue that has received surprisingly little attention so far. It introduces trust as an important factor in the generation and structuring of deals. The analysis also builds on a number of papers that explain the contractual features observed in venture capital (see Bengtsson and Ravid (2009), Dessein (2005), Gompers (1997), Hellmann (1998, 2006), and Kaplan and Strömberg (2003)). A recent spate of papers also examines how legal systems influence venture capital contracts (see Bottazzi, Da Rin and Hellmann (2009), Cumming, Schmidt and Walz (2008), Kaplan, Martel and Strömberg (2007), and Lerner and Schoar (2005)). By including investor country fixed effects our analysis already absorbs all cross-country differences in legal systems, so that the effects of trust we document go beyond differences in legal systems.

Finally, our study contributes to the literature on the effects of social capital on finance (see Durlauf and Fafchamps (2006) and Guiso, Sapienza and Zingales (2006) for recent surveys). This literature has focussed on the importance of trust for finance in environments where there is little legal enforcement. For example, Johnson, McMillan and Woodruff (2002) show that well-functioning courts are a prerequisite for entrepreneurs to trust and contract with external suppliers. Guiso, Sapienza, and Zingales (2004) show that social capital has a stronger effect on financial development where legal enforcement is low, as well as among less educated people. Our results on contracting show that, even with good legal enforcement, investors do not rely on sophisticated contracting to overcome lack of trust. Guiso, Sapienza and Zingales (2009) establish the importance of trust for aggregate trade and investment flows. We provide an analysis that is complementary yet distinct. Their analysis remains at the macro level, i.e., at the level of country pairs. We are able to analyze data at the level of individual investor-company pairs. This allows us to address a different set of questions, such as the importance of individual investor characteristics, or the effect of trust on contracts. It also permits us to control for a comprehensive set of alternative explanatory factors, and thus to better isolate the role of trust. Because we focus on a small segment of the economy, we can also safely eliminate any concerns about reverse causality. We can thus bypass all the difficulties of having to find appropriate instruments for the determinants of trust.¹ Also related to our paper is Giannetti and Yafeh (2008), who study the syndicated loan market. They find that lead banks offer smaller and more expensive loans to borrowers located in culturally more distant countries.

The remainder of the paper is structured as follows. Section 1 develops the paper's theoretical motivations. Section 2 explains our data and variables. In Section 3 we examine the effect of trust on investment formation and the role of individual partners' trust. Section 4 examines the effect of trust on contracts and is followed by a conclusion.

¹Obviously our analysis cannot—and doesn't try to—explain the formation of trust itself. See Alesina and La Ferrara (2002), Glaeser et al. (2000), and Guiso, Sapienza, and Zingales (2009) for contributions to the analysis of this question.

1 Theoretical motivation

1.1 What is trust?

In this paper we use a commonly accepted definition of trust, as "the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action."² Two different types of trust are relevant for our study: personalized and generalized trust. Personalized trust is a set of beliefs that one person has about the behavior of another specific person. It is based on a repeated interaction between the two individuals and can thus be thought of as an informed belief. Generalized trust, by contrast, is a set of beliefs about the behavior of a random member of an identifiable group of individuals. Durlauf and Fafchamps (2006) argue that "the main difference between the two is that, for each pair of newly matched agents, the former takes time and effort to establish, while the latter is instantaneous." From an economics perspective, the difference between generalized and personalized trust can be thought of as the difference between poorly-informed prior beliefs versus well-informed posterior beliefs. From an econometric perspective, a key difference is that generalized trust is exogenous to the specific micro-economic transaction, whereas personalized trust is inherently endogenous.

This distinction is particularly relevant in the context of venture capital. A venture capitalist and an entrepreneur typically do not know each other before contracting. After investing, they work closely together (Hellmann and Puri (2002)). At the beginning of their relationship, the (generalized) trust between a potential venture capitalist investor and an entrepreneur is exogenous. Once their relationship has developed, trust becomes personalized and endogenous to the numerous decisions and interactions made along the way. In our study we focus on generalized trust.³

1.2 Why should trust affect venture capital investments?

Our first hypothesis is that higher generalized trust increases the likelihood that a venture capitalist invests in an entrepreneur's company. The underlying logic is that trust helps the search process through which the two parties in the transaction find each other and make the investment decision. For example, a venture capital firm with low (generalized) trust of an entrepreneur may never take much interest in her business plan. Indeed, venture capitalists seriously consider only a small fraction of all business plans proposed to them (Tyebjee and Bruno (1984)). Similarly, an entrepreneur who has low (generalized) trust of a venture capital firm may never bother to initiate contact. Indeed, entrepreneurs typically contact only a subset of all the venture capitalists that are active at any point in time. We therefore submit that higher generalized trust increases the probability that a pair of venture capitalist and entrepreneur generate a match, i.e., that they progress from

 $^{^{2}}$ A large literature which spans several social sciences examines the concept of trust and its effects on human behavior. Guiso, Sapienza and Zingales (2006), Möllering (2006), and Nooteboom (2002) review this literature from different angles.

 $^{^{3}}$ Another conceptual distinction is between trusting and trustworthiness (see Glaeser et al. (2000)). Trusting describes a focal person's beliefs about others, whereas trustworthiness describes other's beliefs about the focal person. In our context, the distinction between trusting and trustworthiness corresponds to the distinction between the venture capitalists' trust of entrepreneurs and entrepreneurs' trust of venture capitalists.

the initial state of non-acquainted potential partners all the way to an actual investment.⁴

There are two possible objections to our hypothesis that trust affects venture capital investments. The first is that there should be no systematic differences in how different people trust a set of individuals. Indeed, if agents have common priors and update them based on all the available information, no systematic differences should persist at the level of generalized trust, which, by construction, excludes private information. One obvious problem with this line of argument is that it doesn't seem to be supported by the data. In Section 2.4.1, for example, we show that trust differentials are both pervasive and remarkably persistent. Moreover, from a theoretical perspective, subjective beliefs can be thought of as non-common priors (Morris (1995)). Their influence can persist when there is limited information exchange and limited updating of beliefs. These conditions might be questionable in liquid and transparent markets, such as those for stocks, but are likely to hold in illiquid and opaque markets such as venture capital.⁵

A second objection to our hypothesis is that even if trust differences persist, they should not matter, because sophisticated investors can undo them by taking advantage of arbitrage opportunities. This argument, too, seems applicable to liquid and transparent markets, but is less forceful in venture capital, where arbitrage is risky and requires a long horizon. Moreover, lack of trust can be self-fulfilling, i.e., it can be explained by the existence of multiple equilibria (Greif (1993)). In the low equilibrium arbitrage is infeasible because the counter-party also has low trust.

A third and very different objection is that the probability that two partners engage in an economic transaction depends on their social networks, an argument often made by sociologists (e.g., Granovetter (1995)). In the context of venture capital, it seems plausible that social networks facilitate the process of search (see Sorenson and Stuart (2001) and Hochberg et al. (2007)). From an economist's perspective, a problem with this objection is that social networks themselves are endogenously formed in a way that reflects the patterns of trust among nations. They can facilitate the matching of entrepreneurs and venture capitalists, but should not be viewed as the ultimate drivers of this process. We therefore view social networks not as an alternative hypothesis, but one of the channels through which trust can affect the formation of venture capital investments.

We also conjecture that the identity of individual decision makers within the venture capital organization matters for investments. Venture capital is an appropriate context to put this conjecture to test. This is because the decision to invest is made not by a single individual but by the whole set of partners in the venture capital firm, who have equity in the firm and participate in periodic meetings where investment decisions are made (Sahlman (1990)). The alternative hypothesis is that all that matters is the nationality of the venture firm itself. This could be due to the fact that venture firms operate largely within their national borders and might therefore take decisions on investing in foreign companies based on what their own countrymen think.

⁴Nooteboom (2000) notes that in times of radical innovation the importance of tacit knowledge makes the codification needed for enforceable contracts difficult. In venture capital the conditions for trust to matter are naturally met, as a venture capital investment exposes both parties to outcome uncertainty, and there are numerous possibilities for opportunistic behavior within a venture capital relationship (Sahlman (1990)).

⁵Sociologists frequently argue that in situations where agents have little objective information, social cues (such as generalized trust) become an important basis for decision making (see Podolny (1994)).

We also look at whether individual partners' experience or education affect investment decisions. We conjecture that deeper experience (measured by US work experience) or higher educational achievements could mitigate the effect of trust (see Bottazzi, Da Rin, and Hellmann (2008)). The idea is that partners with better experience or more education are more competent in screening business plans and entrepreneurial teams, and might therefore be less influenced by broader societal belief patters such as generalized trust.

1.3 How does trust affect contracts?

Mainstream contract theory extensively analyzes financial contracts (Hart (2001)), but rarely considers how trust should affect the design of contracts.⁶ While there has been virtually no theorizing about generalized trust and contracts, there are two opposite views of the relationships between personalized trust and contracts.

Greif (1993, 2006), in the context of medieval trading, and McMillan and Woodruff (2002), in the context of post-socialist transitional economies, suggest that personalized trust and contractual sophistication are substitutes. Their argument is that long-term relationships become more important when the legal system makes formal contracting difficult. The argument for substitutes has also been developed in the management literature, often as a critique to the assumption of opportunistic behavior in economic transactions used in Williamson (1985). The substitutes hypothesis assumes that contracts are an effective safeguard against opportunistic behavior, but that contracts are costly to write and/or renegotiate. Trust among contracting parties can be a less expensive safeguard against opportunistic behavior, so that one would expect less detailed contracts when trust is high (see Lane (1998)).⁷ In an economics context, Spier (1992) argues that contractual incompleteness can be a signal of the offering party's unobservable quality. Formal contracts can then erode personalized trust, and so deter agents from making relation-specific investments (see Fehr and Gächter (2002)). Moreover, people who trust each other expose themselves more easily, accept more interdependence, and impose less control on others (Zand (1972)).

The alternative view is that personalized trust and contractual safeguards are complements. This originates from observing that contracts can be an ineffective safeguard when trust among parties is low (Nooteboom (2002)). Given the costs of contracting, two parties will only find it worthwhile to write a sophisticated contract if they can trust that each party will abide by it. With low trust the contracting parties prefer to avoid the cost of writing a sophisticated contract, and the risk of remaining entangled in uncertain litigation; therefore they use a simpler contract.⁸

The recent work by Hart and Moore (2008) provides another rationalization of the hypothesis of complementarity between trust and contracts, even if the authors do not

⁶See Casadesus-Masanell (2004), Chen (2000), and Francois and Zabojnik (2005) for some exceptions. ⁷Managerial studies also document that trust can provide a control and coordination mechanism in relationships between firms, notably in the case of high-tech or entrepreneurial firms (e.g., Dyer and Chu (2003), and Larson (1992)). They provide anecdotal evidence that trust among firms may achieve similar objectives as detailed contracting, but at a lower cost.

⁸As suggested by Woolthuis, Hillebrand, and Nooteboom (2002), 'trust may be needed prior to setting up a contract to ensure that the time and effort invested in the contract, which can be seen as a relationspecific investment, is not likely to be wasted.' Poppo and Zenger (2002) provide evidence from the outsourcing service industry suggesting that trust and contracts can be complements.

explicitly address the question of trust. They show that if agents use contracts as reference points for their selfish interests, then simple contracts have the benefit of creating less mismatch of entitlement feelings, which in their model prevents ex-post opportunistic behavior. A natural interpretation of their model is to associate mismatched feelings of entitlement with low trust among partners. It follows that the benefit of simple contracts, in terms of creating more clarity, is larger in situations of low trust, predicting a positive relationship between trust and sophisticated contracting.

Note that unlike the theories supporting the substitutes hypothesis, the theoretical underpinnings of the complements hypothesis apply equally well to personalized and generalized trust. This points to a fundamental difference between the two hypotheses. Under the substitutes hypothesis, partners may or may not trust each other, but they believe that contracts will be enforced. Hence they resort to (costly) sophisticated contracts only in situations of low trust in their counterpart. Under the complements hypothesis, however, irrespective of the level of personalized trust among partners, a suspicion that contractual safeguards will not be enforced (i.e., low generalized trust) generates a preference for simpler contracts. Hence the main difference between the substitutes and complements hypotheses concerns the enforceability of contracts. The substitutes hypothesis assumes that the level of trust is sufficiently high for the parties to believe in the validity of contracts, and the need for sophisticated contracts arises when personalized trust is low. The complements hypothesis, instead, assumes that the benefits of sophisticated contracts can only be realized arises in case of high generalized trust, irrespective of the level of personalized trust.

What are the contractual dimensions that matter in venture capital? The theoretical work of Dessein (2005) and Hellmann (2006) explains how simple control structures can give too much power either to the investor or the entrepreneur, and how control structures which are contingent on firm performance can achieve more efficient outcomes. The empirical work of Kaplan and Strömberg (2003) documents the pervasive use of contingent control rights in US venture capital contracts. The prior literature therefore suggests that contingent control rights are a useful testing ground for studying the relationships between trust and contracts. Under the substitutes hypothesis we would expect less contingent contracting in high trust situation, based on the notion that such control rights are unnecessary due to high trust. Under the complements hypothesis we would expect more contingent contracting in high trust situation, based on the notion that trust is a prerequisite for the enforcement of such contracts.

2 Data and variables

In this Section we describe our data sources and motivate our variables, which are defined in Table 1. Table 2 provides descriptive statistics; Panel A for all dependent and independent variables, and Panel B for the structure of deals across countries.

2.1 Data sources

Our data comes from a variety of sources. The main data are gathered through a survey of 750 venture capital firms in 17 European countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norwat, Portugal,

Spain, Sweden, Switzerland, and the UK. In this paper we do not use data on venture firms from Norway and Switzerland, since Eurostat does not collect data on trust from citizens of these countries. Venture firms were included in our sample if they : (i) were full members of the European Venture Capital Association (EVCA) or of a national venture capital organization in 2001, (ii) were actively engaged in venture capital and (iii) were still in operations in 2002. The survey asked detailed information on all first round of financing made between January 1998 and December 2001, as well as information on the venture firm's venture partners.⁹

We received 108 usable responses, which we cross-checked using investor and company websites, commercial databases (Amadeus, Worldscope, and VenturExpert), and trade publications.¹⁰ Our data represent a comprehensive cross-section which provides a good coverage of all countries, with an overall response rate of nearly 16%, a rate significantly larger than for comparable surveys of industrial firms (see Graham and Harvey (2001)). No single country dominates the sample, and no country is left out. Our data are not dominated by a few respondents: the largest venture capital firm accounts for only 5% of the observations, and the largest five for only 16%. Bottazzi, Da Rin and Hellmann (2008, 2009) provide a more extensive discussion of the data, and report additional tests that confirm the representativeness of the sample. We define venture capital investments as those that were reported in the survey as falling into the following financing stages: Seed; Start-up; Expansion; and Bridge.¹¹

The main independent variable is the trust from citizens of one country towards citizens of another country. This variable is collected by Eurostat through a yearly survey of citizens of all European countries. We report in Table 1 the sources for all other independent variables.

2.2 Unit of observation

We adopt two units of observation. In the first part of the analysis, we focus on the decision to invest, i.e., whether to make a deal or not. For this we construct the sample of all potential deals, consisting of every possible pairing between the 108 investors and their 1,216 portfolio companies. Portfolio companies are located in one of the 15 European countries venture investors are from; they are also located in the US, since Eurostat collects trust data in American citizens as well. The unit of observation is the individual investor-company pair (as in Sørensen (2007)). For each company we consider that it could in principle be financed by any of the respondent venture firms. We take into account that some pairs are not feasible because the venture capitalist began operations after the date the company was seeking an investment. Our potential deals dataset includes 107,390 potential deals.

We analyze investor-company in a discrete choice framework where investors choose among companies as investment alternatives. In addition to a simple logit model, we use a conditional logit model where, in the terminology of McFadden (1984), we think of

 $^{{}^{9}}$ We use the term 'firm' for the investor (i.e., the venture capital firm) and the term 'company' to the company that receives the venture capital financing.

¹⁰These 108 firms do not include eight venture firms from Norway and Switzerland, and three firms that only invested in non-European countries for which Eurostat does not collect trust data.

¹¹Our Survey asked respondents to include information only on portfolio companies that received venture capital funding, but to exclude all companies receiving buyout or turnaround finance.

investors as cases and companies as the alternatives. This approach takes the investors' perspective which corresponds to our survey design. In this set-up the trust variable measures how people from the investor's country trust people from the company's country. While investors chose companies, those companies also choose to accept the investments. We therefore also estimate our model treating companies as cases and investors as alternatives, in which case the trust variable measures how people from the company's country trust people from the investor's country.

One limitation of our analysis is that to be included in our sample, a company must have received funding from at least one investor. We clearly cannot observe all the 'marginal' companies that never received any funding from any venture capitalist.¹² Our analysis therefore examines whether trust affects investment decisions among all 'infra-marginal' companies, excluding any effect that trust may have on the marginal companies. It is possible that higher levels of trust increase the size of the venture capital market. Indeed, Figure 1 shows a positive relationship between the size of the venture capital market, measured by aggregate (per capita) investment, and the level of trust received by each country. Therefore it is likely that our analysis understates the total effect of trust.

In the second part of the analysis we focus on the effect of trust on venture capital contracts. For this part of the analysis we use what we call the realized deals sample, which consists of all the investments that we observe in our data. Our realized deals sample contains a total of 1,277 deals, into 1,216 companies, made by 108 venture capital firms. There are more deals than companies because 54 companies receive financing from more than one of our venture investors.

Our base case analysis considers the full sample of deals, irrespective of whether it involves domestic or foreign investors. A unique strength of the Eurobarometer data is that it contains a bilateral measure of trust not only for the foreign countries but also for the domestic country. Indeed, in almost all countries people rank their own country as the most trustworthy—the one exception being Swedes trusting Norvegians more than themselves. Guiso, Sapienza and Zingales (2009) focus on exports and FDI, and therefore do not make use of the domestic trust measures. Our approach has the advantage of making use of the entire trust matrix, but we also need to be concerned with the relationship between trust and home bias. Home bias is one of the components of trust. At the same time, trust is one of several components of the home bias effect (see Karolyi and Stulz (2003)); other components include common language, common legal system, and regulatory hurdles to making foreign investments.

To examine to what extent the trust effect reflects a home bias, we perform some additional analysis on foreign subsamples. There are multiple ways of defining such subsamples. We focus on two definitions that we call the broad and the narrow foreign subsample. The broad foreign subsample excludes investors that only invest domestically (and the companies that only received funding from these investors). The remaining sample consists of 49 investors and 1,216 companies.¹³ Note that this subsample still contains

 $^{^{12}}$ Note that even if we did, their observations would fall out of the regression by the time we consider the conditional logit model.

 $^{^{13}}$ The broad sample drops 512 deals financed by venture firms that invest only domestically. We also retain all 1,216 companies when creating the potential matches with the 49 investors. This gives us a subsample where each company is fundable by all its domestic VCs and by those foreign VCs that invest abroad. None of our results change if we also drop from the set of the potential matches all companies

some (potential and realized) domestic deals, namely the domestic investments of venture capital firms that invest beyond their home country.

The narrow foreign subsample excludes all domestic deals, potential or realized. It only includes investors that invest abroad, and it only includes those companies that have at least one foreign investor. The narrow subsample consists of 49 investors and 223 companies. Excluding all domestic deals fully eliminates the home bias effect, but also has several disadvantages. It leads to understating the full effect of trust, that inherently includes a preference for domestic transactions; it greatly reduces our statistical power; and it alters the natural economic interpretation of the logit model. Indeed, the most important difference between the broad and narrow foreign subsamples concerns the interpretation of the discrete choice model. In the broad foreign subsample we have a well-specified discrete choice problem where investors (the 'cases') choose among companies (the 'alternatives'). This allows for the possibility of substituting domestic and foreign investments. In the narrow foreign subsample, however, the choice set is artificially constrained to only include foreign companies. The econometric model no longer captures the investors' real choice, since it only allows for substitution patterns among foreign investment opportunities, but not between domestic and foreign investments. We conclude that while the narrow foreign subsample has the advantage of eliminating all concerns about home bias, the broad foreign subsample eliminates at least some home bias and has the advantage of capturing more meaningfully the economic choices made by investors.

2.3 Dependent variables

In the first part of the analysis we ask whether a particular investor finances a particular company. The dependent variable is DEAL, which is a dummy variable that takes the value 1 if the venture capital firm has invested in a particular company and 0 otherwise.

In the second part of the analysis we address the relation between trust and contracts. For this we construct five dependent variables that capture the extent to which sophisticated contracting is used in each deal. We consider four types of contingent control rights, whereby the investor is allowed to take certain actions in case the company fails to meet specified performance targets. We look at the right to take control of the board of directors, to obtain voting majority, to liquidate the company, and to fire ('terminate') the founder/CEO. The correlation coefficients among the contingent control variables ranges from 0.24 to 0.51. We also build a summary measure of contingent control rights by summing over the four contingent control dummies. This variable takes a value between 0 and 4.

2.4 Independent variables

2.4.1 Country-dyad level

Some independent variables vary at the country dyadic level, which is the unique pair of investor and company countries. Table 3 reports the correlation structure of these variables.

Our analysis is based on the Eurobarometer measures of trust, that was previously used (and described in detail) by Guiso, Sapienza and Zingales (2009). Eurobarometer is

that are only financed domestically.

a large survey about the social and political attitudes of citizens of the European Union that is executed yearly for the European Commission since 1970. Our trust measure is derived from the Eurobarometer survey waves from 1990 to 1996. We do not collect trust data directly from our survey respondents, since such a measure would be endogenous to their investment experience. The Eurobarometer measure, on the contrary, is clearly exogenous to the investments made by venture capitalists.

How reliable is this measure of trust? First, the trust measure reflects patterns one would intuitively expect: People typically have the highest trust for their own country; Scandinavian countries receive high trust, and are also more trusting; the British trust the French less than other nations; and the French are happy to reciprocate. Second, the Eurobarometer trust measure has a strong correlation with the World Values Survey (WVS) measure of trust, which has been used by several studies (e.g., Knack and Keefer (1997)). The correlation coefficient is 0.72, significant at the 1% level.¹⁴ This strong correlation suggests a reliable measurement of trust that does not depend on the details of how the surveys were implemented. We also notice that trust among nations is remarkably persistent over time: The correlation coefficients across Eurobarometer waves is often over 90% and always above 84%.¹⁵

The remaining country-dyadic variables are meant to capture other factors that should affect the investment decision, or that constitute potentially alternative explanations. We employ three variables that are standard controls in the literature on geography and trade: whether an investor/company pair is either located in the same country, or in neighboring countries (sharing a common border), and how economically far away are two countries, using the difference of the logarithm-transformed per-capita GDP.

We then consider the role of search costs by looking at the amount of information on each country that is reported in another country's main business newspaper. We also consider two country-dyadic variables that capture transaction costs: the similarity of languages and of legal systems.

To capture taste-based preferences, we build two novel proxy measures. The first is the percentage of nights spent by at hotels for holiday purposes by citizens of country iin country j, averaged over the period from 1998 to 2001. The second is a normalized measure of the votes from citizens of country i to the song of country j in the Eurovision Song Contest, averaged over the period from 1993 to 2001. To account for the intensity of economic relationships between countries we use two standard measures from the trade literature: the share of exports and of foreign direct investments from country i into country j (in billions of dollars), averaged over the period from 1998 to 2001.

2.4.2 Other independent variables

Our other independent variables vary at different levels. Three variables are measured at the level of the investor-company pair. First, we compute the log-transformed kilometric

¹⁴The WVS survey question is "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" The WVS therefore only measures how trusting citizens of one country are, rather than bilateral country-dyadic trust. Therefore, we compute the correlation coefficient using the Eurobarometer trust measure for citizens of the same country.

¹⁵Guiso, Sapienza and Zingales (2009) report an additional validation of the Eurobarometer measure based on asking people about the likelihood that a lost wallet be returned.

distance between the cities using the geodetic formula.¹⁶ Second, we compute two measures to capture an investor's propensity to make a deal in a company's industry and stage of financing: the share of investments of a venture capital firm in the same industry in which the company operates, and the share of investments of a venture capital firm in the same stage at which the company is receiving financing.

We consider four company characteristics: its industry of operations, whether the company seeks early stage (seed or start-up) or late stage (expansion and bridge) financing, and the quality of the company's legal system, measured by the quality of enforcement of legal rules described in La Porta et al. (1998) and by the level of the procedural complexity described in Djankov et al. (2002).

We also include different sets of fixed effects: a set of 108 dummy variables, one for each investor, a set of dummies for investor country, and a set of dummies for company country.

Finally, we use some variables that capture the effect of individual partners within the venture firm. First, we consider whether the investor has at least one partner of the same nationality of the company. Second, we compute the difference between the average trust of an investor's partners in the company's country citizens and the trust of the investor's country in the company's country. Third, we compute two indicators of the education and professional experience of a venture firm's partners: whether the venture firm has partners with US work experience and whether the venture firm has partners with a doctoral degree.

3 The role of trust for deal formation

3.1 Methodology

We begin by asking what factors affect a venture capitalist's decision to invest in a company. This requires estimating the probability that a specific venture capitalist invests in a specific company. Formally, our econometric specification is given by:

$$DEAL_p = \alpha + X'_n \beta_n + X'_p \beta_p + X'_i \beta_i + X'_c \beta_c + \varepsilon_p \tag{1}$$

Let *i* index investors and *c* index companies, let p = (i, c) index investor-company pairs, and let *n* index investor-company country dyads. The dependent variable is DEAL, which is a dummy variable for whether, in a given pair *p*, the investor *i* makes a deal with company *c*. The intercept term is denoted by α . The vector X'_n represents variables that vary at the country-dyadic level, namely TRUST, FOREIGN–DEAL, COMMON-BORDER, INFOR-MATION, GDP–DIFFERENCE, LANGUAGE-OVERLAP, and LEGAL–DIFFERENCE. The vector X'_p represents variables that vary at the investor-company pair level, namely DISTANCE, INDUSTRY–FIT and STAGE–FIT. The vectors X'_i and X'_c represent variables that vary across investors and companies, respectively; we discuss them below. Since the key independent variables vary at the level of the country dyad (*n*), we cluster the standard errors of ε_p at the level of the country dyad. Clustering also implies the use of robust standard errors.

¹⁶Such precision allows us to avoid some of the measurement problems that have plagued the literature on trade and geography, which typically uses a much coarser measure—the distance between capital cities (see Head and Mayer (2002)).

To estimate the probability that a deal occurs, we use a logit model (we obtain the same result using a probit). To control for investor characteristics we can afford to use a complete set of investor fixed effects, i.e., 108 dummies. This is clearly the most powerful way of controlling for any investor-specific effects, including the investor's nationality. The fixed effects also take care of any systematic differences across investors, including quality and risk aversion. To control for company characteristics, we use STAGE and INDUSTRY. In addition, we use company country fixed effects. This means that we control for the overall level of trustworthiness (e.g., on average the Swedes are trusted more than the Spaniards). As a consequence our trust variables always reflect *relative trust* (e.g., relative to the average level of trust, the Spaniards are more trusted by the French than by the British). Moreover, the country fixed effects control for all country-specific effects, such as investment opportunities and the legal and institutional environment.¹⁷

With over one thousand companies in our sample we cannot add one fixed effect for every company. However, to control even more finely for company characteristics, we also consider a conditional logit model, using the asclogit command in STATA. This semiparametric specification effectively includes both investor and company fixed effects, thus providing the richest possible set of controls.

3.2 Main results

The estimates from the simple and conditional logit models are reported in Table 4. In column (i) we report the results of the logit estimation without any country-dyadic controls (except those related to geography, namely foreign deal and common border); in column (ii) we include all the country-dyadic controls. In columns (iii) and (iv) we report the results from the conditional logit model, first without and then with country-dyadic controls. Panel A reports the results for the full sample, and Panel B for the two foreign subsamples.

We find that the coefficient on TRUST is positive and significant at the 1% level across all specifications and samples. This clearly supports the hypothesis that trust affects the likelihood of making an investment.

In addition to being statistically significant, the estimated coefficient measures an economically important effect. We focus on column *(ii)* of Panel A in Table 4, which is our main specification; results for the other specifications are very similar. The logit regression estimates the odds ratio, defined as the ratio of the probability of success to the probability of failure of the event (in our case of a deal being made). Consider a 1% increase in the percentage of people that express high trust. An example (drawn near the median of the trust distribution) is that 15.3% of Spaniards have high trust for Germans, and 16.3% of Dutch have high trust for Germans. Such a 1% increase generates a 7.0% increase in the probability of reaching a deal.¹⁸ Another approach would be to consider moving from the 25th to the 75th percentile of the trust distribution. For example, 10.5% of British people highly trust Germans, which is at the 25th percentile, while 24.8% of Norwegians highly trust Germans, which is at the 75th percentile. Moving from the 25th

¹⁷For example, the decision to invest may depend on the level of a country's English language proficiency, in addition to language overlap (see the discussion below). This is captured by the country fixed effects.

¹⁸At low levels of predicted probability, the marginal increase in probability is very close to the increase in the odds ratio given by the estimated coefficient.

to the 75th percentile of the trust distribution then corresponds to a 105% increase in probability of reaching a deal—in other words, it more than doubles it.

Table 4 contains several other results. Geographic distance is very important. The coefficient for DISTANCE has a negative sign and is statistically highly significant in all specifications. This confirms the notion that venture capital is a highly localized activity. For the full sample the coefficient for FOREIGN–DEAL is negative and statistically significant in three out of four specifications. In the broad foreign subsample, however, it becomes insignificant. This suggests that a reluctance to invest abroad obviously applies to those venture firms that never invest abroad, but that once a venture firm invests abroad, there is no more difference between investing in a domestic versus foreign deals. The coefficient for COMMON–BORDER remains mostly insignificant. The coefficient of INFORMATION is positive and statistically highly significant. This result suggests that search costs, broadly defined, matter. The result is even more surprising given the fact that our measure is only a rough proxy for differences in the amount of information available to investors. GDP–DIFFERENCE is always negative, sometimes significantly so. LANGUAGE–OVERLAP is mostly positive and significant except in the narrow foreign subsample, suggesting that the presence of domestic deals is driving this variable. LEGAL–DIFFERENCE remain mostly insignificant. Throughout all regressions we find that INDUSTRY-FIT and STAGE-FIT have a highly significant effect, with an (expected) positive sign. This shows that specialization is an important aspect of the venture capital market: companies need to fit into investors' strategic preferences in order to attract investments.

In Panel B we report results from regressions that include the country-dyadic controls. Columns (i) and (ii) show the results for the logit and conditional logit model for the broad foreign subsample, which excludes all venture capital firms that only invest domestically. Columns (iii) and (iv) show the results for the narrow foreign subsample, which includes only those potential deals that involve a foreign investment. The result about the importance of trust continues to hold across all of these specifications. The effects of the control variables are largely similar to those they have the full sample, except for FOREIGN– DEAL, which becomes insignificant in the broad foreign subsample. This suggests that the negative effect in the main sample is largely driven by the domestic investors. Among the international investors there is no bias against foreign deals. Naturally, FOREIGN– DEAL is not included in the narrow foreign subsample which by construction contains only foreign deals.

3.3 Trust and individual partners

3.3.1 The role of partner nationality

So far our analysis measures trust using the venture capital firm's headquarter location, finding that it holds a relevant effect on facilitating financial transactions. Our next step is to ask whether this effect is influenced by the presence of venture partners of different nationality. Venture capital firms are typically small partnerships where the decisionmaking process is confined with the partners (or senior management in case of bank, corporate, or public venture firms). We thus ask whether the individual decision maker's trust affects the firm's investments.

A useful aspect of our data is that we have information on the nationality of each

venture capital partner. We therefore examine whether having a partner with a certain nationality changes a venture capital firm's likelihood of making an investment. To examine the importance of partner nationality we consider two effects. First, we consider whether any of the partners of the venture capital firm have the same nationality as the company. The hypothesis is that having a partner from the same country of the company increases the likelihood of investing. For example, since the British have low trust in the French, we ask whether a British firm with a French partner is more likely to invest in a French company than a British firm without French partners. The PARTNER–MATCH variable captures this effect.

While generalized trust is clearly exogenous to the venture firm's investment decisions, the choice of partners might well be endogenous. A venture capital firm that plans to make investments in a certain country might hire a partner from that country. When we use this variable we therefore only aim to establish correlation, not causation.

To further isolate the effect of trust, we also consider a second measure that we call PARTNER–TRUST. Our main trust variable is based on the investor firm's country. We also calculate the trust scores for each of the venture firm's partners, based on their country of birth. We then take the firm's average score and subtract the main trust score. This variable therefore measures the *differential* trust of the individual venture capitalists within the firm. To return to our example, suppose that the British venture capital firm had no French partner, but it had an Italian partner. Italians have higher trust for the French than the British. The PARTNER–TRUST measure this increase in trust. It thus allows us to examine whether the presence of an Italian partner increases the likelihood that the British venture capital firm makes an investment in the French firm. This measure is arguably less prone to being endogenous, as it would seem far-fetched for a British venture capitalist to hire an Italian partner in view of making investments in France.

Panel A of Table 5 reports the results with these two additional variables. The results show that the composition of partners inside the venture capital firm indeed matters for investment decisions. Columns (i) and (ii) shows that PARTNER–MATCH is positive and statistically highly significant, indicating that the presence of a foreign partner with the same nationality as the company is associated with a higher likelihood of a deal. Columns (iii) and (iv) shows that PARTNER–TRUST is also positive and statistically highly significant, suggesting that the national composition of partners affects investment decisions. Moreover, the statistical and economic significance of the main trust variable is barely affected by the inclusion of these additional partner measures.¹⁹

Panels B and C of Table 5 report similar results for the two foreign subsamples. The PARTNER–MATCH effect continues to hold across all specifications except the conditional logit in the narrow foreign subsample. The PARTNER–TRUST effect is significant in the broad foreign subsample but turns insignificant in the narrow foreign subsample. This might be due to the lower number of observations. It also suggests that the presence of high-trust foreign partners has a stronger effect on the substitution margin between domestic versus foreign investments (captured in the broad foreign subsample), rather than on the substitution margin among foreign investments (captured in the narrow foreign subsample).

 $^{^{19}}$ The economic effect of PARTNER–TRUST variables is also sizeable. An increase of 1% in PARTNERS–TRUST increases the odds ratio by between 5.9% and 8.8%, depending on the model.

3.3.2 The role of partner characteristics

We now use our data on individual partners to gain additional insights on how other partner characteristics affect the role of trust. One might argue that the role of trust should disappear when investors are sufficiently sophisticated. To test this conjecture, we exploit differences among individual partners to examine whether their experience or education achievements affect the influence of trust on deal formation. Since our empirical model relies on the use of investor fixed effect, we cannot just include measures of experience or education. Instead, we use interactions between trust and such measures to tease out the *differential* trust effect.

Prior work by Kaplan, Martell and Strömberg (2007) suggest that having work experience in the US exposes European venture partners to best management practice, and to a culture of entrepreneurship that could facilitate the evaluation of business projects. In addition, we conjecture that obtaining a PhD as the highest educational achievement might be correlated with sophisticated reasoning. Table 6 reports the results of two sets of regressions, one for US experience and one for PhD education. For each set, we estimate the two specifications of Table 4 that include all dyadic variables. For brevity's sake, we only report the coefficient for trust, interacted with a dummy for each of the two variables. The results show that US experience and PhD education reduce the effect of trust in a statistically significant manner. At the same time this reduction leaves a strong and significant trust effect even for the most experienced and educated partners. The results for US experience continue to hold across all foreign subsamples, while the results for PhDs becomes statistically insignificant in three out of four regressions in the foreign subsamples.

These results give us additional insights into the importance of trust for investment. The fact that we continue to find a significant effect of trust when looking at variation across partners within firms provides evidence that trust operates at the level of individual decision makers. Moreover, the fact that experience and education reduce the influence of trust but do not wipe it out, suggests that trust has an effect even when decision are made by the most sophisticated professional investors.

3.4 Alternative measures of trust

Since our trust variable measures the trust of an average citizen, a potential concern is that it doesn't reflect the beliefs of venture capitalists. That is, the average citizen's trust may not apply to the socio-economic group venture capitalists belong to.²⁰ We therefore recalculate our measure of trust for a subset of the population that is likely to correspond to the average venture capitalist. Since the Eurobarometer includes some information on the socioeconomic characteristics of respondents, we restrict our attention to respondents whose profile broadly corresponds to that of professionals. More precisely, we consider respondents who are in the upper half of the income distribution, were at least 20 years old when finishing their last studies (implying they have at least a bachelor degree), and are between 34 and 50 years old—an interval that covers one standard deviation above and below the mean age of the venture partners in our sample. We find that this additional

²⁰For example, while it may be true that the French hardly enjoy a high level of trust in the pubs of East London, what we care about is what trust they enjoy in the wine bars of the City of London.

measure of the trust variable is highly correlated with the main measure of trust (the correlation coefficient is 0.99), suggesting that differences in the socioeconomic group have little effect on trust. When we use this additional measure, the results, for both trust and the other variables, remain unaffected.

Our analysis so far focuses on the trust of the investor's country in the company's country. This reflects the notion that investors are the main decision maker. However, entrepreneurs also have to accept their investors. We thus also consider trust from the company's perspective. These two measures contain strong elements of reciprocity and are highly correlated. Including both measures in the same regression would thus be meaningless. Instead, we reran all of our regressions substituting 'investor' trust with 'company' trust. The information variable is our only other asymmetric variable, so we also rebuild it from the company's perspective.²¹

Our main trust measure is the percentage of people reporting a high level of trust in another country's people. From the Eurobarometer survey we also obtain the 'average' level of trust expressed. This means imposing a cardinal interpretation over an ordinal measure, which is why we prefer not to use it in our main analysis. The results of Table 4 continue to hold using average trust. In the logit model trust is marginally significant at the 11% confidence level, and in the conditional logit it is strongly significant at the 1% level.

Our analysis of foreign subsamples is meant to separate out any home bias from our trust effect. Another way of separating out the home bias is to take it out of the trust measure directly. For this we regress, at the level of country-pairs, our trust measure on a dummy variable for domestic deals, and construct the residuals. We can think of these residuals as a home-bias-adjusted measure of trust. We find that all the results of our analysis remain valid.

The venture capital industry is highly cyclical. Our data covers the period 1998-2001, so that the early sample comes from an upward cycle and the latter part from a down cycle. One may ask whether the effect is trust is stronger in boom or bust periods. To address this, we interact the trust variable with two dummies, one for the boom period (1998-1999) and one for the bust period (2000-2001). In unreported regressions, we find that both coefficients continue to be positive and statistically significant. The boom coefficient is larger than the bust coefficient, but the difference between coefficients is not statistically significant.

3.5 Alternative explanations

A challenge for the entire research on trust is to what extent one can distinguish the effect of trust from other explanations. The base model, beyond using investor and company fixed effects, already controls for three important alternative explanations. First, we control for geographic factors: the distance between each individual investor and each individual company, whether a deal is domestic, the existence of common borders, and the difference in GDP per capita. Second, we control for search costs, with the information variable.

²¹Since both parties have to agree to the deal, it may be that what matters is the lower (or possibly higher) of the two trust levels. We reran all of our regressions using the lower (and also the higher) between 'investor' and 'company' trust, finding again that all our results continue to hold.

Third, we control for transactions costs, since language overlap and commonality of legal systems are likely to affect the costs of closing a deal. We now look at other potential explanations.

There is a long tradition in economics of distinguishing beliefs from preferences, dating back at least to the seminal work of Becker (1957) and Arrow (1973). In our context, our concern is to ensure that our result on trust is not driven by investor's tastes. We need to distinguish how much investors 'trust' other countries, based on beliefs, and how much investors 'like' other countries, based on taste. Liking is a subjective concept that is difficult to measure, so we consider two different proxies. First, we use relative tourism flows, since tourism flows reflect taste-based preferences among nations. Admittedly, this is a noisy measure, but it has the advantage of being a bilateral measure. Moreover, the country fixed effects remove any common factors that affect tourism (e.g., the fact that Italy has more tourist attractions than Denmark). Second, we exploit data from the Eurovision Song Contest, a popular and uniquely European event, to construct a measure of taste-based preferences that varies within country pairs. Eurovision is an annual televised music contest among European countries, where each country is allowed to send one candidate. Viewers from around Europe rank the contestants from other countries on a scale from 0 to 12 (9 and 11 are excluded); each positive grade is allocated once, and the other contestants receive a grade of zero. While the absolute ranking presumably depends on contestants' quality, prior research has argued that the relative vote ranking reflect patterns of how much people from one European country like others (Clerides and Stengos (2006), Fenn et al. (2006)). As in Felbermayr and Toubal (2007), we control for song quality through a comprehensive set of song-specific fixed effects. We then average the scores received by all countries in the period 1993-2001 and normalize their distribution to standard normal.

Columns (i) and (ii) of Panel A of Table 7 report the results of adding the TOURISM and EUROVISION taste proxies to our main logit regression. We find that the effect of trust is not affected by their inclusion, both in statistical and economic terms. The tourism variable has a negative and statistically significant effect. The Eurovision variables is statistically not significant. Thus our main results about trust do not appear to be driven by taste-based preferences.

Another questions is to what extent the relationship between trust and venture investments differs from the relationship between trust and trade, identified by Guiso, Sapienza and Zingales (2009). To examine this, we include measures of trade or foreign direct investments (FDI) as additional controls. One reason for doing this is that existing patterns of trade may facilitate venture investments. Another reason is to test whether trust matters *more* for venture investment than for general trade flows. However, there is also one reason not to include trade. Guiso, Sapienza and Zingales (2009) establish a positive relationship between trust and aggregate trade flows. Including trade in our equation therefore introduces multicollinearity, i.e., the model may be over-specified. With this caveat, columns (*iii*) and (*iv*) of Panel A of Table 7 report the results of adding EXPORTS and FDI to our main regression model. As expected, we find that both EXPORTS and FDI are positive and statistically significant. However, their inclusion does not affect the significance and magnitude of the trust variable. This suggests that, even after possibly over-specifying the model, we continue to find that trust matters. In fact, the evidence suggests that trust matters more for venture capital investment than for aggregate trade and FDI flows. Panels B and C replicate the analysis in the broad and narrow foreign subsamples. The results on trust continue to hold.

3.6 Further robustness

In defining the sample of potential deals, we deliberately refrain from imposing restrictions on the set of admissible potential deals, other than requiring that the venture capital firm was in existence at the time that the company was seeking funding. This means that we let the econometric model determine what matches are more or less likely. An alternative approach is to impose additional restrictions on the set of admissible potential deals, making assumptions about which pairs have a zero probability of resulting in a deal. While we prefer not to make such assumptions in the main model, we now impose some additional restrictions to ensure that our results are not driven by our sample construction criteria.

First, we note that the foreign subsamples excludes the venture capital firms that do not invest abroad. Second, we observe that some venture capital firms in our sample never invest in certain sectors, or never invest in companies at certain stages of development. We therefore exclude the potential deals where the investor never invests in a company's sector or stage. We find that our results are unaffected by this restriction.²²

Our data contains investors from 15 countries but companies from 18 countries. To make sure that this imbalance does not affect any of the results, we rerun all of our regressions eliminating the companies from the three non-EU countries (Norway, Switzerland, and the US), but find that this did not affect any of our results.

The construction of our sample involves multiple observations for the same company. One concern is the standard independence assumption of the logit model may be violated in this context.²³ We therefore estimate the logit regressions clustering standard errors by company instead of country-dyad, finding that this does not reduce statistical significance levels. We also consider two-dimensional clustering, by company and investor, as suggested by Thompson (2006). We find again that this does not reduce the sign or statistical significance levels of any coefficient.

A few companies in our sample make multiple deals with different investors. Instead of conditioning the conditional logit model on individual companies, we can condition on individual deals. This even more fine-grained approach does not affect any of our results.

Our unit of analysis is the potential deal, but our key dependent variable, TRUST, varies at a higher level of aggregation, namely the country-dyad. Our base specification thus clusters by country-dyads. As an additional robustness check we consider aggregating the data to the level of the country-dyads. This involves a considerable loss of information, since we have to discard most of the micro-level information. Still, we consider a Poisson model where the dependent variable is the number of deals in each country dyad, and the independent variables are just the country-dyad controls. We find that the coefficient on trust continues to be significant at the 1% level; using a negative binomial model yields similar results. This suggests that our key results hold irrespective of the unit of analysis

 $^{^{22}}$ We also combine these three restrictions, excluding potential deals where the investor never invests abroad or in a company's sector or stage—and again find that our results are not affected.

²³This is not an issue for the conditional logit model, which directly accounts for the interdependence of observations within groups.

used.

Some venture capital firms have multiple offices. This affects our measure of effective distance from the companies. We therefore compute the minimal distance between each company and all (potential and actual) investors. We find that none of our results are affected.

The investment decision of a venture capital firm can respond to market conditions, in particular the number of entrepreneurs seeking funding. We conjecture that a firm receiving a high number of funding requests can afford to be pickier, i.e., such a firm is less likely to invest in any one company. In the short run, a venture capital's fund size is fixed (Sahlman (1990)), so that a higher solicitation rate makes it harder for any one company to receive funding from that venture firm. Cassiman and Ueda (2006) formally derive such a prediction in a model where the investor considers the option value of waiting. Our survey obtained information on how many business plans an investor has received each year. From this we construct a time-varying measure of the number of entrepreneurs soliciting funding from a specific venture capital firm ('solicitation rate').²⁴ When we include this variable in our main model, we find that its coefficient is always negative and largely significant. Moreover, our results for trust are confirmed.²⁵

The INFORMATION, TOURISM, and EUROVISION variables have no value for domestic pairs. In our base model we use the minimum possible value 0. As a robustness check we instead use the maximum possible value 1, but find that this does not affect any of our results.

The prior social capital literature argues that trust among nations is related to the history of wars, to religious similarities, and even to genetic similarities (Guiso, Sapienza and Zingales (2009)). These variables have no obvious connection to venture capital investments, and their inclusion comes at the risk of over-specifying the model because they have been shown to be correlated with trust. Still, we confirm that the main effect of trust continues to hold even after controlling for these additional factors.

Finally, in case one still worries that there remain any unobserved peculiarities in our data that drive the results, we construct a falsification exercise. Instead of giving each investor and company its true country identity, we randomly assign a 'false' country identity. Based on these false identities, we also recalculate all the country-dyadic variables. The coefficient of TRUST in our main regressions becomes utterly insignificant, providing further reassurance that our main result is not an artifact of the sample, but reflects a real and robust economic phenomenon.

4 The role of trust for contracts

4.1 Methodology

The results from the previous section raise the question of whether contracts can overcome a lack of trust. In Section 1.3 we derived two competing hypotheses about the relationship

 $^{^{24}}$ One drawback of the solicitation rate is that we do not have the necessary information for all investors, so that we lose more than 20% of the observations. We therefore remain somewhat cautious about this robustness check.

 $^{^{25}}$ The only exception is that trust becomes marginally significant, with a p-value of 0.14, in the conditional (but not the ordinary) logit specification, and only in the broad foreign sample.

between trust and contracts that we labeled the substitutes and complements hypotheses. Under the substitutes hypothesis investors require sophisticated contracts to compensate for a lack of trust. They believe that contracts are enforceable, but only incur the costs of writing sophisticated contracts when they perceive a need for it, namely when there is insufficient trust. Under the complements hypothesis, by contrast, investors question the enforceability of sophisticated contract. They are willing to incur the costs of writing a sophisticated contract only when they trust a nation, including its culture and institutions.

Our unit of analysis is the sample of realized deals. We examine four contingent control rights, pertaining to the composition of the board of directors, the allocation of voting rights, the decision to liquidate the company's assets, and the ability to terminate the founders' employment contract. These control rights all address major areas of potential conflict between investors and entrepreneurs (Sahlman (1990)). Contingent control rights are measured with dummy variables, so that we use a logit model (using a probit model does not change our results). We also create an index which counts the number of control rights used, for which we use a Poisson model. Formally, our econometric specification is given by:

$$Contract_r = \alpha + X'_n\beta_n + X'_r\beta_r + X'_i\beta_i + X'_c\beta_c + \varepsilon_p$$
(2)

where r = (i, c) indexes the *realized* investor-company pairs. The dependent variables are CONTINGENT-BOARD-RIGHTS, CONTINGENT-VOTING-RIGHTS, CONTINGENT-LIQUIDATION-RIGHTS, CONTINGENT-TERMINATION-RIGHTS, and their summary index, CONTINGENT-CONTROL-RIGHTS. The X vectors represent the same variables as in equation (1), with one notable exception. Because the sample of realized deals is much smaller, adding investor fixed effect would over-specify the model. We therefore use a set of four control variables: INDEPENDENT-VC, VC-AGE, VC-SIZE, and investor country fixed effects.

We cannot directly estimate the model in the subsample of realized foreign deals, because there are not enough observations to provide precise estimates for the large number of country and industry fixed effects. We therefore use the full realized sample, using fixed effects and interacting TRUST with a domestic and a foreign dummy. The resulting variables are TRUST–DOMESTIC, which picks up cross-country variation in trust towards one's own country, and TRUST–FOREIGN, which picks up cross-country variation in trust towards foreign countries.²⁶

4.2 Estimation results

Table 8 reports our findings for the full sample. Each column represents a different dependent variable. The coefficient of TRUST is always positive and statistically significant for four out of five dependent variables, the exception being contingent board rights. This result is not consistent with the 'substitutes' hypothesis, where contingent contracts are used to address lack of trust. Instead, it is consistent with the 'complements' hypothesis, where trust is a prerequisite for sophisticated contracting. This is a new and intriguing

²⁶Domestic trust is not absorbed by the country fixed effects, because these are estimated on the full sample which also includes foreign deals.

result.²⁷

Table 9 reports results for both foreign subsamples. In the broad foreign subsample we find that both the domestic and the foreign trust effects are positive and significant, with the exception (as in Table 8) of contingent board rights. The coefficients of TRUST–DOMESTIC and TRUST–FOREIGN are not significantly different at conventional levels. For the narrow foreign subsample TRUST–FOREIGN remains always positive, but loses significance in two regressions. None of the coefficient estimates from Table 9 support the substitutes hypothesis. Notice that, because the regression model separately controls for foreign deal, the domestic trust effect should not be equated with a home bias. Indeed, TRUST–DOMESTIC picks up cross-country variation in the level of trust towards one's own country, not the difference between domestic and foreign trust.

To interpret the positive coefficient of trust on contractual sophistication, it is important to remember that we are measuring generalized trust, not personalized trust. Low trust does not mean that the investors distrust individual entrepreneurs—after all they are making an investment. Instead, what is driving the complements hypothesis is that with low generalized trust investors forgo sophisticated contracts, because they question the enforceability of these contracts in the first place. To further validate this interpretation we consider a test that is based on a difference-in-difference approach. The regressions in Table 8 use company country fixed effects, thereby controlling for differences in the company country's enforcement regime. We now investigate whether the effect of trust on contracting varies according to the strength of legal enforcement. We divide our sample into (company) countries with low versus high quality of contract legal enforcement. The complements hypothesis emphasizes that before investors consider writing sophisticated contracts, they must first have a general confidence in their enforcement. We would therefore expect that the positive effect of trust is strongest in countries with higher standards of legal enforcement.²⁸ By contrast, the substitutes hypothesis posits that contingent contracts compensate for the lack of trust. We would therefore expect that the negative effect of trust is more pronounced in countries with low standards of legal enforcement, i.e., that the substitution effect is stronger when there is more to compensate for.

Table 10 reports the results of regressions equivalent of those reported in Table 8; in Panel A we interact trust with the rule of law index, and in Panel B with the index of procedural complexity. Both of these indices have been extensively used in the literature to measure the quality of legal contract enforcement. For brevity's sake we only report the coefficients of trust interacted with a dummy for high versus low levels of these indices, omitting all other controls. Consistent with the complements hypothesis, we find that

²⁷Note that the FOREIGN–DEAL coefficient is sometimes positive and significant. Further investigations reveal that this is due to the fact that trust and foreign-deal are highly multicollinear in the realized deals sample. In unreported regressions we reran the model of Table 8 using the home-bias-adjusted measure of trust discussed in Section 3.4. We find that the trust coefficient is very similar, and that the foreign deal coefficient becomes insignificant (except for Board where it is negative and significant). We therefore caution against a literal interpretation of the foreign deal coefficient in Table 8.

²⁸This formulation is also consistent with Gennaioli (2009), who develops a theory model in which judicial bias reduces the extent to which agents choose contingent contracts. The underlying idea is that the quality of the legal system affects uncertainty about enforcement. In his setting, the procedures and disclosures rules characterizing Common Law systems can reduce the ability of judges to base their decisions on ambiguous factors. This reduces the importance of judicial bias and fosters the adoption of contingent contracts.

trust has a stronger positive effect on contingent contracts in countries with better legal enforcement. With weaker legal enforcement, however, the effect of trust is often not even significant. These findings further reinforce the complements hypothesis.

4.3 Endogenous selection

Our interpretation of the main trust coefficient is based on examining variations in trust across a set deals that are assumed to be otherwise comparable. Our fined-grained control variables give us some confidence in the assumption that those deals can be compared in terms of their observable characteristics. The question remains whether our results could be driven by selection on unobservables. For example, it could be that the only investments that are made in low trust situations are simpler, less risky deals that require fewer contingent control rights. Since we cannot observe the business nature of a deal, we could incorrectly attribute to trust what is in effect due to an (unobservable) selection effect.

To address concerns about selection on unobservables, we estimate a Heckman selection model. The selection equation is given by equation (1) and the outcome equation by equation (2). We explore two main approaches and point out strengths and weaknesses of both. The fact that our results remain robust across both approaches provides at least some assurance that our main results appear not to be driven by selection effects. Wooldridge (2002, ch. 17.4) provides a discussion of the merits and limits of either approach.

Our first approach uses the main specifications of the selection and outcome equations reported in Tables 4 and 8. Identification depends in part on the normality assumption, although the selection equation has more controls, because it uses investor fixed effects instead of the investor-country fixed effect used in the outcome equation. The strength of this approach is that no additional assumptions are made relative to the base model that we already discussed extensively. The weakness is that the identification is driven by the econometric specification, rather than an economic exclusion restriction.

Our second approach addresses this weakness by augmenting the selection equation with variables that affect the selection equation, but than can reasonably be excluded from the outcome equation. Obviously one can always argue that any variable that affects deal formation also affects contracting. Our plausibility argument therefore relies on an interpretation that these variables, while demonstrably important for deal formation, are unlikely to still matter by the time that the entrepreneur and venture capitalist negotiate contractual terms.

We propose three identifying variables. The first two are EXPORTS and FDI. A high level of exports and FDI means that two countries are likely to have well-established networks for facilitating cross-country commercial transactions. Rauch (2001) suggest that trade flows are related to interpersonal networks. We argue that the presence of these cross-country institutional links facilitate the search process between entrepreneurs and investors. At the time of contracting, however, it is reasonable to assume that these trade-related institutional links no longer play an important role, i.e., they don't affect the kind of contracts entrepreneurs and investors agree upon. In Section 3.5 we noted that trade-related variables could over-specify the model, because EXPORTS and FDI are correlated with trust. Their inclusion could thus interfere with the coefficient estimate

of trust in the selection equation. In the Heckman model this is less of a concern, since the main focus is the estimation of the trust coefficient in the outcome equation.

Our third identifying variable (SOLICITATION) measures the likelihood that a particular investor invests in a particular company in a particular year. In Section 3.6 we already showed that investment decisions depend on the number of entrepreneurs seeking fund. We now argue that while SOLICITATION matters in the selection equation, it is reasonable to exclude it from the outcome regression. This is because it seems unlikely that the details of the contract depend on the number of other entrepreneurs seeking funding.

Because of the large number of observations (over 100,000 in the selection equation) and control variables (including over 100 dummy variables), we can only achieve convergence in STATA by using the linear probability model (Heckman instead of Heckprob), and the two-step estimation procedure (which still achieves consistent estimates). Table 11 reports the results of the Heckman selection models we estimate. Panel A reports results for the full sample, and Panels B and C for the two foreign subsamples. For space sake, ach Panel reports only the coefficients for TRUST (TRUST–DOMESTIC, TRUST–FOREIGN) in the outcome equation, both for the base model and for the augmented model where FDI, Export, and Solicitation are added to the selection equation.

Panel A of Table 11 clearly shows that TRUST remains positive and statistically significant in both the base and augmented models. This is true for all equations (except for BOARD), suggesting that our previous findings are not affected by unobservable selection issues. We also find that three identifying variables in the augmented model are highly significant and have the expected sign, i.e., higher exports and FDI increases the probability of a company being selected, whereas a higher solicitation rate decreases that probability. The estimates of Mills' λ are positive and significant in four out of ten equations (and insignificant in the others), suggesting that unobservable selection effects may affect contingent control rights, but that this is not a very strong effect. However, when selection occures, it does not seem to interfere with the main effect of trust on contracting. Panels B and C extend the analysis to the broad and narrow foreign subsamples. The results are again consistent with the complements hypothesis, thus confirming the robustness of our results.²⁹ For all augmented models we find that the coefficient estimates of all three excluded variables are statistically highly significant. We also test whether instruments are weak using the first-stage F-statistic following Stock, Wright, and Yogo (2002). We find that the test exceeds the 5% critical value, supporting the relevance of our instruments. We also use all possible combinations of one or two of our excluded variables, and found that all the results remain valid.

4.4 Further robustness

In unreported regressions we perform further robustness checks for the realized deals sample. Similar to sections 3.4-3.6, we employ the socioeconomic measure of trust, the measure of trust from the company perspective, the cardinal measure of trust and the home-bias-free measure of trust. We add tourism and Eurovision Song Contest, we set INFORMA-TION to 1 instead of 0 for domestic deals, and we cluster standard errors at the investor

²⁹Similar to the full sample, the excluded variables remain highly significant. Mill's λ is very similar to those of Panel A, although their significance levels are slightly lower in the augmented model.

instead of country-dyad level. None of these variations negate our main findings. We also use, as an index to measure the quality of the legal system, the Corruption Perception Index (CPI) developed by Transparency International (www.transparency.org).in place of the rule of law and procedural complexity indices of Table 10. The CPI provides a measure of the institutional quality of a country, which could affect parties' willingness to adopt contingent contracts. The results remain fully consistent with those of Table 10.

Finally we check that the results for contracts do not depend on any single country, or on the inclusion of deals with companies located in non-EU countries. We find that the trust coefficient is positive and statistically significant in most specifications, insignificant in very few specifications, and never negative and significant (details are available upon request). In addition, building on our prior work (Bottazzi, Da Rin and Hellmann (2008, 2009)), we introduce a control for the amount invested in each company, and also add controls for whether deals were syndicated, and whether the venture capital firm was the lead investor. Trust does not seem to explain the use of contingent liquidation rights but all other results remain unaffected.

5 Conclusion

Economists often distrust explanations that rely on subjective beliefs. Trust is a subjective belief, but so is economists' distrust of trust-based explanations. Hence the importance of empirically demonstrating the effect of trust.

No single paper can definitively establish the full economic importance of trust. The approach we take in this paper is to examine the effect of trust in a tightly defined environment, venture capital, where we can obtain micro level data. This has the advantage that we can safely dismiss concerns about reverse causality, and that we can control for a large number of alternative explanations. We find that trust has a significant effect on the investment decisions of venture capital firms, even after controlling for a host of other variables, including geographic controls, differences in information, languages and legal systems, and taste-based preferences. This holds even when we control for investor and company fixed effects, which accounts for any unobserved factors like the quality of national institutions, the ability, risk tolerance, and preferences of individual investors and the sectoral specialization of individual countries. We also find that the national composition of the venture partners who decide on an investment matters. Finally, we uncover evidence that the effect of trust extends beyond investment decisions and extends to how financial contracts are structured.

Our paper opens up further lines of research. For example, our results on the composition of partners inside a firm points to the importance of examining under which circumstances trust matters more (or less) for investment, and how the presence of heterogeneous agents can affect trust in teams. Another open question is the effect of trust on financial contracts. Our analysis is the first to tackle this issue, and suggests that trust and contractual sophistication are complements, not substitutes. Future research should examine in a more comprehensive manner how contracts are affected by trust.

The analysis also suggests some policy conclusion. Governments across the globe are seeking to attract venture capitalists to invest in their countries (Bottazzi and Da Rin (2002), Da Rin, Nicodano, and Sembenelli (2006)). Our results suggest that investments

ought to be expected mostly from countries with well established trust for the recipient country. This provides some guidance as to what countries might be the most promising targets for government that want to attract foreign venture capital investments.

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Table 1: Variable definitions

Table 1(a): Dependent variables

Deal is measured at the potential deal level, the control rights variables at the (realized) deal level.

Variable	Description
DEAL	dummy variable that takes the value 1 if the venture capital firm has invested in a particular company; 0 otherwise. We obtain the data from our survey instrument, which asked venture firms to list all their portfolio companies.
CONTROL RIGHTS: BOARD	dummy variable that takes the value 1 if the venture capital firm reports to have included contingent board rights in the specific deal. We obtain the data from our survey instrument, which asked: Does your firm has a right to obtain control of the board of directors contingent on the realization of certain events? Possible answers were: Yes, No.
CONTROL RIGHTS: VOTING	dummy variable that takes the value 1 if the venture capital firm reports to have included contingent voting rights in the specific deal. We obtain the data from our survey instrument, which asked: <i>Does your firm has a right to obtain voting rights contin-</i> <i>gent on the realization of certain events?</i> Possible answers were: <i>Yes, No.</i>
CONTROL RIGHTS: LIQUIDATION	dummy variable that takes the value 1 if the venture capital firm reports to have included contingent liquidation rights in the spe- cific deal. We obtain the data from our survey instrument, which asked: Does your firm has a right to liquidate the company contin- gent on the realization of certain events? Possible answers were: Yes, No.
CONTROL RIGHTS: TERMINATION	dummy variable that takes the value 1 if the venture capital firm reports to have included contingent termination rights in the spe- cific deal. We obtain the data from our survey instrument, which asked: <i>Does your firm has a right to fire the founder/CEO contin-</i> <i>gent on the realization of certain events?</i> Possible answers were: <i>Yes, No.</i>
CONTROL RIGHTS: INDEX	index measure of contingent control rights obtained from summing over the four contingent control dummies. This variable takes a value between 0 and 4.

Table 1(b): Independent variables: Country-dyadic level

Country-dyadic variables are measured at the level of the investor country and company country pair.

Variable	Description
TRUST	percentage of the citizens in one contry that trust a lot people from the other country. It is obtained from the Eurostat's Eurobarometer question: "I would like to ask you a question about how much trust you have in people from various countries. For each, please tell me whether you have a lot of trust, some trust, not very much trust or no trust at all." The answers range from 1 (no trust at all) to 4 (a lot of trust). Our measure is the percentage of individuals who respond 4.
FOREIGN DEAL	dummy variable that takes the value 1 if the investor and company are from different countries; 0 otherwise.
COMMON BORDER	dummy variable that takes the value 1 if the investor's and company's countries share a land border; 0 otherwise (including domestic deals).
GDP DIFFERENCE	difference (for each country pair) of the log-transformed per capita GDP, expressed in euros and averaged over the 1998–2001 period, obtained from Datastream.
INFORMATION	percentage of times a country is mentioned in the other country's main business news- paper over the 1998-2001 period, obtained from the Factiva database. For each country dyad, we record the number of articles in the main business newspaper of country i that mention in the headlines country j, or citizens of country j. We divide this number by the total number of articles in the newspaper that are related to all the countries in our sample. We set INFORMATION equal to zero for domestic deals (i=j).
LANGUAGE OVERLAP	percentage of people who speak the same language in each country dyad, summed across all primary languages spoken in the two countries. This variable is set to 1 for domestic deals. The data is obtained from www.ethnologue.com.
LEGAL DIFFERENCE	dummy variable that takes the value 1 if investor and company are located in countries with different legal origins; 0 otherwise. We distinguish between Common law, French- origin civil law, German-origin civil law, and Scandinavian-origin civil law. The data is obtained from Laporta et al. (1998).
TOURISM	percentage of the nights spent for holiday purposes by citizens of country i at hotels in country j, out of the total holiday nights spent in the sample countries, averaged over the period from 1998 to 2001. This variable is set to 0 for domestic deals. The data is obtained from Eurostat.
EUROVISION	Normalized score of the votes from citizens of country i to the song of country j in the Eurovision Song Contest, computed as in Felbermayr and Toubal (2007), averaged over the period from 1993 to 2001. This variable is set to 0 for domestic deals. The data is obtained from the www.eurovision.tv website.
EXPORTS	percentage of the exports from country i to country j, out of the total export towards the sample countries, averaged over the period from 1998 to 2001. This variable is set to 0 for domestic deals. The data is obtained from the UN World Trade database.
FDI	percentage of the foreign direct investments from country i to country j out of the total FDI towards the sample countries, averaged over the period from 1998 to 2001. This variable is set to 0 for domestic deals. The data is obtained form OECD's Main Economic Indicators database.

Table 1(c): Other independent variables

Variables are measured at the company level, except Distance, Industry Fit, and Stage Fit (investor-company pair). Fixed effects are measured at the level they refer to.

Variable	Description
DISTANCE	natural logarithm of one plus the kilometric distance between the venture capital investor and the company. The distance is computed by applying the geodetic for- mula to the longitudinal and latitudinal coordinates of each investor and company pair. This data is obtained from www.multimap.com.
INDUSTRY	set of dummy variables for each company's industry. We obtain the data from our survey instrument, which gave the following choices: Biotech and pharmaceuticals; Medical products; Software and internet; Financial services; Industrial services; Electronics; Consumer services; Telecommunications; Food and consumer goods; Industrial products (including energy); Media & Entertainment; Other.
EARLY STAGE	dummy variable that takes value 1 if the company raised seed or start-up finance; 0 otherwise. We obtain the data from our survey instrument, which asked: <i>Indicate the type of your first round of financing to this company</i> . Possible answers were: Seed; Start-up; Expansion; Bridge.
INDUSTRY FIT	percentage of the deals made by the venture capital investor in the same industry of the company.
STAGE FIT	percentage of the deals made by the venture capital investor in the same stage at which the company gets financed.
SOLICITATION	Number of business plans received by each venture capital firm in each year be- tween 1998 and 2001.
HIGH–RULE (LOW)	dummy variable that takes value 1 (or 0) if the company's legal system is above (below) the median level of the Rule of Law index from La Porta et al. (1998) .
HIGH–PROCEDURAL (LOW)	dummy variable that takes value 1 (or 0) if the company's legal system is above (below) the median level of the procedural complexity index from Djankov (2002). We rescale the index so that higher values correspond to a less formal legal system.
INVESTOR F.E.	set of 108 dummy variables, one for each investor.
COMPANY F.E.	set of 1,216 dummy variables, one for each company.
INDEPENDENT-VC	dummy variable that takes the value 1 if the venture capitalist defines itself as an independent venture firm; 0 otherwise
VC–SIZE	natural logarithm of one plus the amount under management of the venture capital firm at the end of the sample period, in millions of current euros.
VC–AGE.	natural logarithm of one plus the age of the venture capital firm, measured in months at the end of the sample period.
INVESTOR–COUNTRY F.E.	set of investor country dummy variables.
COMPANY–COUNTRY F.E.	set of company country dummy variables.

Table 1(d): Independent variables: Individual partner characteristics

Variable	Description
PARTNER-MATCH	dummy variable that takes value 1 if the investor has at least one partner of the same nationality of the company; 0 otherwise.
PARTNER-TRUST	difference between the trust in the company's country citi- zens measured as the average trust of the investor's individ- ual partners, based on their country of birth, and the trust in the company's country citizens by the investor's country citizens, measured by TRUST.
US-EXPERIENCE (NO-US-EXPERIENCE)	dummy variables that equal to 1 (or 0) if a venture capital investor has (or has not) partners with US work experience.
PHD (NO–PHD)	dummy variables that equal to $1 (or 0)$ if the venture capital investor has (or has not) partners with a doctoral degree.

Venture partner variables are measured at the level of the venture capital investor.

Table 2Descriptive statistics

This Table provides provides descriptive statistics for the potential and realized deal samples. Panel A provides the mean, minimum and maximum values of our dependent and independent variables (except fixed effects and industry dummies). For dummy variables we report the frequency of observations. Variables are defined in Table 1. Panel B provides the distribution of deals across countries. As we explain in Section 2.1, Norway, Switzerland, and the US are receiving countries only.

Panel A: Descriptives: potential and realized deal samples

		POTEN	FIAL DEALS	S SAMPLE	REALI	ZED DEALS	S SAMPLE
VARIABLE	Unit	Mean	Minimum	Maximum	Mean	Minimum	Maximum
Deal	dummy	0.012	0	1		_	_
Control Rights: Board	dummy	—	—	_	0.386	0	1
Control Rights: Voting	dummy	—	—	_	0.342	0	1
Control Rights: Liquidation	dummy	—	_	_	0.317	0	1
Control Rights: Termination	dummy	—	—	_	0.323	0	1
Control Rights Index	index	—	—	_	1.296	0	4
Trust	%	20.402	3.680	71.600	43.448	7.120	71.600
Information	%	0.085	0	0.664	0.028	0	0.664
GDP Difference	$\log(1 + \in /pop)$	0.106	0	0.618	0.056	0	0.283
Language Overlap	dummy	0.152	0	1	0.836	0	1
Legal Difference	dummy	0.178	0	1	0.872	0	1
Distance	$\log(1+km)$	6.720	0	9.322	3.829	0	9.176
Foreign Deal	dummy	0.893	0	1	0.180	0	1
Common Border	dummy	0.211	0	1	0.866	0	1
Industry Fit	%	0.144	0	1	0.365	0.017	1
Stage Fit	%	0.509	0	1	0.708	0.048	1
Early Stage	dummy	0.589	0	1	0.588	0	1
Tourism	%	0.083	0	0.401	0.013	0	0.400
Eurovision	%	0.334	-1.126	2.895	0.066	-0.440	2.723
FDI	%	0.083	0	0.693	0.032	0	0.456
Exports	%	0.093	0	0.469	0.021	0	0.469
Solicitation	thousands	0.441	0	2.617	_	—	—
Partner-Match	dummy	0.028	0	1	0.038	0	1
Partner-Trust	%	0.059	-30.165	20.018	-0.731	-30.165	9.773
VC–Experience–High	dummy	0.508	0	1	_	—	_
US-Experience	dummy	0.548	0	1	_	—	—
PhD	dummy	0.361	0	1	_	—	—
High–Rule	dummy	—	—	—	0.372	0	1
High–Procedural	dummy	—	—	_	0.489	0	1
Independent-VC	dummy	—	—	—	0.602	0	1
VC-Size	$\log(1 + \in mln)$	—	—	_	4.486	1.300	4,100.000
VC-Age	$\log(1 + \text{months})$	_	—	_	97.742	12	390
Number of observations	· · · · · · · · · · · · · · · · · · ·	107,390			1,277		
Number of companies		1,216			1,216		
Number of deals		1,277			1,277		
Number of venture firms		108			108		

	Deals								(COMI	PANY	COU	JNTR	Y						
INVESTOR COUNTRY	Made	(for eign)	AT	BE	DK	\mathbf{FI}	\mathbf{FR}	DE	GR	IE	IT	LU	РТ	\mathbf{ES}	SE	\mathbf{NL}	UK	NO	CH	US
AT - Austria	56	4	52	_	_	_	—	3	_	_	_	_	—	—	1	_	_	_	_	
BE - Belgium	42	24	_	18	—	_	5	1	—	1	1	—	—	1	4	2	4	_	_	5
DK - Denmark	37	10	_	_	27	_	—	_	_	_	_	_	—	—	3	_	_	—	_	7
FI - Finland	97	12	_	_	2	85	—	1	_	_	_	_	—	—	3	1	1	3	_	1
FR - France	309	51	1	8	_	_	258	7	_	_	2	1	—	—	2	2	8	—	8	12
DE - Germany	270	58	1	1	1	_	—	212	_	1	_	_	—	—	1	1	5	—	4	42
GR - Greece	7	0	_	_	_	_	1	_	7	_	_	_	—	—	_	_	_	—	_	_
IE - Ireland	18	0	_	_	_	_	—	_	_	18	_	_	—	—	_	_	_	—	_	_
IT - Italy	35	5	_	_	_	_	2	_	_	_	30	1	—	—	_	_	_	—	_	2
LU - Luxemb.	9	6	_	_	_	_	3	_	_	_	_	3	—	—	_	_	_	—	1	2
PT - Portugal	20	0	_	_	_	_	_	—	_	—	_	_	20	_	_	_	_	_	_	_
ES - Spain	102	3	_	_	_	_	1	_	_	_	_	_	—	99	_	_	2	—	_	_
SE - Sweden	53	3	_	_	_	_	—	_	_	_	_	_	—	—	50	_	_	3	_	_
NL - Netherlands	48	16	_	1	1	_	1	_	_	_	_	1	1	1	_	32	6	—	2	2
UK - United Kingdom	174	38	_	_	_	4	6	8	_	3	_	_	—	—	_	7	136	—	_	7
NO - Norway			_	_	_	_	—	_	_	_	_	_	—	—	_	_	_	—	_	_
CH - Switzerland			_	_	_	_	—	_	_	_	_	_	—	—	_	_	_	—	_	_
US - USA			_	_	_	_	—	_	_	_	_	_	—	—	_	_	_	—	_	_
Total deals:	1,277	230																		
		Deals Received:	54	28	31	89	277	232	7	23	33	6	21	101	67	45	162	6	15	80
		(for eign)	2	10	4	4	19	20	0	5	3	3	1	2	17	13	26	6	15	80

Panel B: Distribuition of deals across countries

Table 3: Correlations

This Table provides pairwise correlations (and significance levels, in brackets) among the country-dyadic variables defined in Table 1.

	Trust	Inform.	GDP Diffor	Lang. Overlap	Legal Diffor	Distanco	Foreign.	Common	Tourism	Euro-	Exports	FDI
Trust	1.000		Diller.	Overlap	Diller.	Distance	Deal	Dorder		VISOII		
Information	$-0.219 \ (0.00)$	1.000										
GDP Diff.	$-0.385\ (0.00)$	$0.007 \\ (0.03)$	1.000									
Lang. Overlap	$0.676 \\ (0.00)$	$-0.199 \\ (0.00)$	$-0.237 \ (0.00)$	1.000								
Legal Differ.	$-0.065 \ (0.00)$	$0.207 \\ (0.00)$	$0.126 \\ (0.00)$	0.124 (0.00)	1.000							
Distance	$-0.463 \\ (0.00)$	0.314 (0.00)	0.294 (0.00)	$-0.529 \\ (0.00)$	0.017 (0.00)	1.000						
Foreign Deal	$-0.724 \ (0.00)$	0.314 (0.00)	0.209 (0.00)	$-0.845 \\ (0.00)$	0.161 (0.00)	0.615 (0.00)	1.000					
Comm. Border	0.031 (0.00)	0.314 (0.00)	-0.098 (0.00)	-0.018 (0.00)	0.377 (0.00)	-0.128 (0.00)	0.179 (0.00)	1.000				
Tourism	$-0.336 \ (0.00)$	0.341 (0.00)	0.273 (0.00)	0.274 (0.00)	0.424 (0.00)	$0.152 \\ (0.00)$	0.303 (0.00)	0.138 (0.00)	1.000			
Eurovision	-0.119 (0.00)	$0.150 \\ (0.00)$	0.048 (0.00)	-0.189 (0.00)	0.101 (0.00)	0.115 (0.00)	0.181 (0.00)	$0.196 \\ (0.00)$	-0.075 (0.00)	1.000		
Exports	$-0.188 \\ (0.00)$	0.661 (0.00)	$-0.045 \\ (0.00)$	$-0.190 \\ (0.00)$	0.322 (0.00)	$0.115 \\ (0.00)$	0.391 (0.00)	0.531 (0.00)	0.354 (0.00)	0.259 (0.00)	1.000	
FDI	$-0.143 \\ (0.00)$	0.430 (0.00)	-0.037 (0.00)	0.001 (0.80)	0.208 (0.00)	0.235 (0.00)	0.260 (0.00)	-0.006 (0.00)	0.024 (0.00)	0.133 (0.00)	0.525 (0.00)	1.000

Table 4The main model

This Table reports results of logit and conditional logit regressions with investor fixed effects for the potential deals sample. The dependent variable is DEAL. Variables are defined in Table 1. Company controls are complete sets of dummies for each company's country, industry and stage. Columns (i) and (ii) report results of logit regressions. Columns (ii) and (iv) report results from conditional logit regressions. All models are discussed in Section 3. Panel A reports results for the full sample, and Panel B for the broad and foreign subsamples discussed in Section 2. For each independent variable, we report the estimated coefficient and the z-score (in parenthesis) computed using (Huber-White) heteroskedasticity-robust standard errors, clustered by country-dyad. Values significant at the 1%, 5% and 10% level are identified by ***, **, *.

	(i)	(ii)	(iii)	<i>(iv)</i>
	Logit	Logit	Cond. Logit	Cond. Logit
Trust	0.072^{***}	0.069^{***}	0.062***	0.068^{***}
IIust	(4.69)	(3.80)	(3.51)	(3.47)
		4 080***		5 179***
Information		(3 29)		(3.68)
		(0.20)		(0.00)
		-4.491^{**}		-0.956
GDP Difference		(-2.49)		(-0.39)
		0.740*		1 107*
Language Overlap		(1, 69)		$1.12(^{+})$
		(1.08)		(1.70)
		-0.164		-0.407
Legal Difference		(-0.57)		(-1.28)
Distanco	-0.224^{***}	-0.221^{***}	-0.160^{***}	-0.168^{***}
Distance	(-2.63)	(-2.58)	(-3.87)	(-4.04)
	-2.1/2***	-1.52/*	-1.648**	-0.760
Foreign Deal	(-3.92)	(-1.91)	(-2.55)	(-0.88)
	()	(-)	(()
Common Bondon	0.136	-0.280	-0.427	0.782^{*}
Common Dorder	(0.49)	(-1.03)	(-1.43)	(-2.48)
	6 098***	6 062***	4 000***	1 094***
Industry Fit	(08 11)	(98/6)	(11.00)	(10.80)
	(20.44)	(20.40)	(11.03)	(10.03)
	2.944***	2.972***	2.830***	2.852^{***}
Stage Fit	(12.52)	(12.78)	(12.03)	(12.22)
		T 1 1 1	T 1 1 1	
Investor Fixed Effects	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included
Observations	107,390	107,390	107,390	107,390
Neuropen of surface for	0.4995	0.3031	100	
Number of venture firms	108	108	108	108
number of companies	1,210	1,210	1,210	1,216

Panel A: FULL SAMPLE

	(i)	(ii)	(iii)	(iv)
	Logit	Cond. Logit	Logit	Cond. Logit
-	Broad fore	ign subsample	Narrow forei	gn subsample
Trust	0.061***	0.062^{**}	0.084***	0.062***
11 ust	(2.94)	(2.52)	(3.08)	(2.71)
Information	4.138***	4.609***	4.399***	3.966***
mormation	(3.02)	(3.52)	(3.99)	(3.17)
CDD Difference	-2.317	2.361	-5.001^{**}	-4.492^{**}
GDP Difference	(-1.15)	(-0.89)	(-2.25)	(-2.53)
Lan mua na Ouranlan	0.984*	1.334*	-1.497*	-0.717
Language Overlap	(1.93)	(1.88)	(-1.65)	(-1.12)
Loral Difference	-0.075	-0.276	-1.020**	0.780**
Legal Difference	(-0.26)	(-0.88)	(2.08)	(2.53)
Distance	-0.143**	-0.085^{*}	-0.416^{***}	-0.211***
Distance	(-2.46)	(-1.91)	(-5.24)	(-2.98)
Faraire Daal	-1.014	-0.273		
roreign Dear	(-1.16)	(-0.31)		
Common Bondon	-0.274	-0.718^{**}	-0.071	-0.366
Common Dorder	(-1.00)	(-2.26)	(-0.20)	(-1.04)
Luduetere Eit	6.554***	4.505***	6.808***	4.704***
maustry Fit	(23.84)	(8.17)	(14.36)	(7.36)
Qtaux Et	2.859***	2.536***	2.697***	1.959***
Stage Fit	(12.29)	(8.56)	(7.59)	(5.74)
Investor Fixed Effects	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included
Observations	49,104	49,406	8,734	8,734
$Pseudo R^2$	0.4241	_	0.3323	_
Number of venture firms	49	49	49	49
Number of companies	1,216	1,216	223	221

Panel B: FOREIGN SUBSAMPLES

Table 5Partner effects

This Table reports results of logit regressions with investor fixed effects for the potential deals sample. The dependent variable is DEAL. Variables are defined in Table 1. Control variables are those used in Table 4. Company controls are complete sets of dummies for each company's country, industry and stage. Columns (i) to (iii) report results of regression models which include measures of the PARTNER-MATCH and PARTNER-TRUST variables discussed in section 3.5. Panel A reports results for the full sample. Panels B and C report results for the broad and foreign subsamples discussed in Section 2, respectively. For each independent variable, we report the estimated coefficient and the z-score (in parenthesis) computed using (Huber-White) heteroskedasticity-robust standard errors, clustered by country-dyad. Values significant at the 1%, 5% and 10% level are identified by ***, **, *.

	<i>(i)</i>	(ii)	(iii)	(iv)
	Logit	Cond. Logit	Logit	Cond. Logit
Trunct	0.064^{***}	0.068^{***}	0.074^{***}	0.073***
Trust	(3.81)	(3.53)	(4.03)	(3.73)
	0.150***	9 000***		
Partner-Match	2.150	2.099		
	(4.12)	(3.77)		
			0.088***	0.059*
Partner-Trust			(4.06)	(1.67)
Control Variables	Included	Included	Included	Included
Investor Fixed Effects	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included
Observations	107,390	107,390	107,390	107,390
$Pseudo R^2$	0.5079	_	0.5059	-
Number of venture firms	108	108	108	108
Number of companies	1,216	1,216	1,216	1,216

Panel A: FULL SAMPLE

Panel B: BROAD FOREIGN SUBSAMPLE

	(i)	(ii)	(iii)	(iv)
	Logit	Cond. Logit	Logit	Cond. Logit
Trungt	0.058^{**}	0.060^{***}	0.067^{***}	0.067***
Trust	(3.02)	(2.63)	(3.15)	(2.79)
	1 673***	2 118***		
Partner-Match	(4.21)	(3.60)		
			0.000***	0.070**
Partner-Trust			0.096^{-1}	0.079^{++}
			(3.15)	(2.35)
Control Variables	Included	Included	Included	Included
Investor Fixed Effects	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included
Observations	49,104	49,406	49,104	49,406
$Pseudo R^2$	0.4296	_	0.4277	_
Number of venture firms	49	49	49	49
Number of companies	1,216	1,216	1,216	1,216

	(i)	(ii)	(iii)	(iv)
	Logit	Cond. Logit	Logit	Cond. Logit
Truct	0.079^{***}	0.059^{***}	0.087***	0.064^{***}
Trust	(2.99)	(2.75)	(3.10)	(2.75)
	0 604**	0.725		
Partner-Match	(0.094)	(1.5c)		
	(2.44)	(1.30)		
			0.039	0.027
Partner-Trust			(0.78)	(0.77)
			.	
Control Variables	Included	Included	Included	Included
Investor Fixed Effects	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included
Observations	8,374	8,374	8,374	8,374
$Pseudo R^2$	0.3352	_	0.3327	_
Number of venture firms	49	49	49	49
Number of companies	223	221	223	221

Panel C: NARROW FOREIGN SUBSAMPLE

Table 6The effect of trust: the role of education and experience

This Table reports results of variations of the logit and conditional logit regressions of the main model of Table 4, where we take into account the education and experience of venture firms' partners. Columns (i) and (ii) correspond to the models reported in columns (ii) and (iv) of Table 4. Panel A reports results for the full sample, and Panel B for the broad and foreign subsamples discussed in Section 2. For each Panel and specification we report two coefficients that correspond to the effect of trust interacted with a dummy variable defined in Table 1. These variables are: VC-EXPERIENCE–HIGH; US–EXPERIENCE; and PHD. We do not report the coefficients of all other variables. For each estimated coefficient we report the coefficient and the level of significance; for each pair of coefficients we also report a Wald test for their difference and its p-value. Values significant at the 1%, 5% and 10% level are identified by ***, **, *.

Panel A: FULL SAMPLE

	(i)	(ii)
	Logit	Cond. Logit
US–Experience		
Trust*US–Experience	0.053^{***}	0.045**
Trust*No–US–Experience	0.097^{***}	0.109^{***}
Wald test (p-value)	15.08(0.00)	11.62(0.00)
PhD		
Trust*PhD	0.058^{***}	0.049**
Trust*No-PhD	0.082^{***}	0.107^{***}
Wald test (p-value)	$4.72^{**}(0.03)$	$11.56^{***} (0.00)$

Panel B: FOREIGN SUBSAMPLES

	(i)	(ii)	(i)	(ii)
	Logit	Cond. Logit	Logit	Cond. Logit
	Broad fore	ign subsample	Narrow fore	ign subsample
US–Experience				
Trust*US–Experience	0.044^{*}	0.038	0.043	0.026
Trust*No–US–Experience	0.085^{***}	0.097^{***}	0.109^{***}	0.098^{***}
Wald test (p-value)	7.09(0.01)	9.60(0.01)	5.58(0.02)	4.73(0.03)
PhD				
Trust*PhD	0.061^{***}	0.055^{**}	0.108***	0.073**
Trust*No-PhD	0.063^{**}	0.097^{***}	0.065^{*}	0.051^{**}
Wald test (p-value)	$0.02 \ (0.89)$	$6.05\ (0.01)$	1.18(0.28)	$0.32 \ (0.57)$

Table 7Additional models

This Table reports results of logit regressions with investor fixed effects for the potential deals sample. The dependent variable is DEAL. Variables are defined in Table 1. Control variables are those used in Table 4. Company controls are complete sets of dummies for each company's country, industry and stage. Columns (i) through (iv) report results of logit regressions corresponding to the model reported in column (ii) of Table 4 and also include the TOURISM, EUROVISION, EXPORT and FDI variables, respectively. Panel A reports results for the full sample. Panels B and C report results for the broad and foreign subsamples discussed in Section 2. For each independent variable, we report the estimated coefficient and the z-score (in parenthesis) computed using (Huber-White) heteroskedasticity-robust standard errors, clustered by country-dyad. Values significant at the 1%, 5% and 10% level are identified by ***, **, *.

	(i)	(ii)	(iji)	(iv)
	Logit	Logit	Logit	Logit
Truct	0.073***	0.071***	0.056***	0.067***
Trust	(3.62)	(4.08)	(3.14)	(4.87)
т. :	-3.193*			
Tourism	(-1.82)			
		-0 182		
Eurovision		(-0.82)		
			10 836***	
Exports			(3.29)	
				F 01C***
FDI				$5.810^{-1.0}$
				(1.12)
Control Variables	Included	Included	Included	Included
Investor Fixed Effects	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included
Observations	97,736	99,977	107,390	101,638
$Pseudo R^2$	0.4961	0.5236	0.5055	0.5112
Number of venture firms	108	108	108	108
Number of companies	1,216	1,136	1,216	1,211

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Paner	A:	F ULL	SAMPLE

	(i)	(ii)	(iii)	(iv)
	Logit	Logit	Logit	Logit
Trust	0.064^{***}	0.051^{**}	0.047^{**}	0.057^{***}
11 (15)	(2.82)	(2.45)	(2.48)	(2.88)
T	-2.954*			
Tourism	(-1.65)			
.		0.061		
Eurovision		(0.27)		
			12 083***	
Exports			(3.35)	
				7 307***
FDI				(8.54)
Control Variables	Included	Included	Included	Included
Investor Fixed Effects	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included
Observations	44,950	45,714	44,104	46,491
$Pseudo R^2$	0.4185	0.4514	0.4293	0.4414
Number of venture firms	49	49	49	49
Number of companies	1,216	1,216	1,216	1,216

Panel B BROAD FOREIGN SUBSAMPLE

Panel C NARROW FOREIGN SUBSAMPLE

	(i)	(ii)	(iii)	(iv)
	Logit	Logit	Logit	Logit
Trust	0.072^{***}	0.064^{*}	0.071^{**}	0.096^{***}
Trust	(2.57)	(1.83)	(2.51)	(3.66)
	-2.373			
Tourism	(-0.79)			
		0.061		
Eurovision		(0.061)		
		(0.27)		
E			4.536	
Exports			(1.19)	
				1 959***
FDI				(3.42)
Control Variables	Included	Included	Included	Included
Investor Fixed Effects	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included
Observations	7,965	4,737	8,734	7,974
$Pseudo R^2$	0.3533	0.3356	0.3332	0.3341
Number of venture firms	49	49	49	49
Number of companies	233	233	233	233

Table 8 Contingent control rights

This Table reports results of poisson and logit regressions for the sample of realized deals. Column (i) reports results of a Poisson regression whose dependent variable is CONTINGENT-CONTROL-RIGHTS. Columns (ii) through (v) report results of logit regressions whose dependent variables are CONTINGENT-BOARD-RIGHTS, CONTINGENT-VOTING-RIGHTS, CONTINGENT-LIQUIDATION-RIGHTS, and CONTINGENT-TERMINATION-RIGHTS. Variables are defined in Table 1. Investor controls include a dummy for whether the venture firm is independent or captive, the venture firm's size (VC-SIZE) and age (VC-AGE), and investor nationality. Company controls are complete sets of dummies for each company's country, industry and stage. For each independent variable, we report the estimated coefficient and the z-score (in parenthesis) computed using (Huber-White) heteroskedasticity-robust standard errors, clustered by country-dyad. Values significant at the 1%, 5% and 10% level are identified by ***, **, *.

	Index	Board	Voting	Termination	Liquidation
	(i)	(ii)	$(iii)^{-}$	(iv)	(v)
	Poisson	Logit	Logit	Logit	Logit
Turnet	0.025^{*}	0.094	0.207***	0.182**	0.102**
Trust	(1.76)	(1.40)	(4.32)	(2.39)	(2.08)
Information	-0.449	-2.299	0.852	4.829***	5.677***
	(-0.59)	(-0.58)	(0.35)	(2.70)	(3.16)
	-1.970	-10.210	7.497	7.238	-4.933
GDP Difference	(-1.26)	(-1.53)	(0.94)	(1 44)	(-0.78)
	(1.20)	(1.00)	(0.01)	(1.11)	(0.10)
	-0.260	-4.478^{***}	2.477^{*}	0.764	1.493
Language Overlap	(0.58)	(-3.16)	(1.72)	(0.54)	(1.09)
Legal Difference	0.357	1.924^{*}	-1.448	-0.564	-1.168
Logar Dinoronoo	(1.08)	(1.89)	(-1.37)	(-0.44)	(-1.17)
	-0.014	0.031	-0 129***	-0.028	0.021
Distance	(-0.94)	(0.88)	(-3.46)	(-0.80)	(1.00)
	(0.04)	(0.00)	(0.10)	(0.00)	(1.00)
Faustin Daal	0.512	-1.823	8.142***	6.265^{*}	4.743**
Foreign Deal	(0.71)	(-0.75)	(3.63)	(1.76)	(2.00)
	0 559*	1 000	0.407	0.05.4**	1 (50**
Common Border	-0.553	-1.029	-0.407	-2.034	-1.032
	(-1.95)	(-1.19)	(-0.03)	(-2.52)	(-2.31)
	-0.118	0.772	-0.351	0.089	-0.722
Industry Fit	(0.29)	(0.75)	(-0.47)	(0.11)	(-0.92)
	· · ·	~ /	· · · ·		× ,
Ctomo Ett	-0.004	0.972	-0.108	0.262	-0.894*
Stage Fit	(-0.02)	(1.36)	(-0.22)	(0.27)	(-1.94)
Investor Controls	Included	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included	Included
Observations	1,064	1,120	1,044	1,045	1,046
Pseudo R^2		0.292	0.328	0.240	0.239

Table 9Contingent control rights: effect of foreign deals

This Table reports results of poisson and logit regressions for the sample of realized deals. Column (i) reports results of a Poisson regression whose dependent variable is CONTINGENT-CONTROL-RIGHTS. Columns (ii) through (v) report results of logit regressions whose dependent variables are CONTINGENT-BOARD-RIGHTS, CONTINGENT-VOTING-RIGHTS, CONTINGENT-LIQUIDATION-RIGHTS, and CONTINGENT-TERMINATION-RIGHTS. Variables are defined in Table 1. TRUST is interacted with a dummy equal to one if a deal is domestic (TRUST-DOMESTIC) or foreign (TRUST-FOREIGN). In Panel A the interaction is based on the broad foreign subsample definition. In Panel B the interaction is based on the narrow foreign subsample definition. The model specification is the same as in Table 8. We report the coefficients for TRUST-DOMESTIC, TRUST-FOREIGN, and FOREIGN-DEAL only. We also report a Wald test for the difference between the coefficients of TRUST-DOMESTIC and TRUST-FOREIGN, and its p-value. For each independent variable, we report the estimated coefficient and the z-score (in parenthesis) computed using (Huber-White) heteroskedasticity-robust standard errors, clustered by country-dyad. Values significant at the 1%, 5% and 10% level are identified by ***, **, *.

	Index	Board	Voting	Termination	Liquidation
	(i)	(ii)	(iii)	(iv)	(v)
	Poisson	Logit	Logit	Logit	Logit
Trust domostia	0.028^{*}	0.098	0.215^{***}	0.185^{**}	0.108^{**}
Trust-domestic	(1.85)	(1.47)	(4.63)	(2.39)	(2.18)
Truck for sim	0.024*	0.089	0.200***	0.179**	0.096**
1rust-foreign	(1.66)	(1.29)	(4.20)	(2.33)	(1.99)
Foreign Deal	1.578^{*}	-1.795	8.387***	6.383*	4.899**
	(1.86)	(-0.73)	(3.77)	(1.76)	(2.05)
$Wald \chi^2(1)$	0.47	0.44	1 20	0.10	0.51
$(\mathbf{p}_{\mathbf{v}})$	(0.50)	(0.51)	(0.25)	(0.76)	(0.48)
(p-value)	(0.50)	(0.51)	(0.25)	(0.76)	(0.48)

Panel A: BROAD FOREIGN SUBSAMPLE

Panel B: NARROW FOREIGN SUBSAMPLE

	Index	Board	Voting	Termination	Liquidation
	(i)	(ii)	(iii)	(iv)	(v)
	Poisson	Logit	Logit	Logit	Logit
Trust domostic	0.043^{***}	0.152^{***}	0.212^{***}	0.195^{***}	0.132***
Trust-domestic	(2.62)	(2.65)	(3.46)	(3.04)	(2.66)
Trust foreign	0.011	0.034	0.204^{***}	0.125^{*}	0.042
11ust-toreign	(0.77)	(0.60)	(4.28)	(1.68)	(0.75)
	1 578*	_0.482	8 109***	7 600**	6 405**
Foreign Deal	(1.86)	(0.402)	(2.402)	(2.46)	(2.49)
	(1.80)	(-0.24)	(2.01)	(2.40)	(2.40)
Wald $\chi^2(1)$	5.88**	8.65***	0.03	2.90*	2.43
(p-value)	(0.02)	(0.00)	(0.87)	(0.09)	(0.12)

Table 10Trust and the quality of legal enforcement

This Table reports results of variations of the logit and poisson models of Table 8, where the effect of trust takes different values for investment in countries with high/low values of the quality of legal enforcement. We use rule of law and procedural complexity as measure of legal enforcement quality; variables are defined in Table 1. For each specification we report two coefficients, corresponding to the effect of trust interacted with a dummy for a high/low value of the legal enforcement index. Investor controls include a dummy for whether the venture firm is independent or captive, the venture firm's size (VC–SIZE) and age (VC–AGE), and investor nationality. Columns (i) through (v) report results of regressions corresponding to those in Table 8, without reporting the coefficients of the other dependent variables. For each estimated coefficient of trust interacted with the legal enfocement dummy, we report the coefficient and the level of significance; for each pair of coefficients; we also report a Wald test for their difference and its p-value. Values significant at the 1%, 5% and 10% level are identified by ***, **.

	Index	Board	Voting	Termination	Liquidation
	(i)	(ii)	(iii)	(iv)	(v)
	Poisson	Logit	Logit	Logit	Logit
Panel A: Rule of Law					
Trust*Low–Rule	0.009	0.013	0.200***	0.164^{*}	0.048
Trust*High-Rule	0.047^{***}	0.120^{***}	0.304^{***}	0.183^{**}	0.114^{***}
Wald $\chi^2(1)$ (p-value)	$11.76^{***} (0.00)$	9.42^{***} (0.00)	$3.11^* (0.07)$	$0.29\ (0.59)$	$2.81^{*}(0.09)$
Panel B: Procedural Cor	nplexity				
Trust*Low–Procedural	0.023^{*}	0.075	0.204^{***}	0.154^{*}	0.039
Trust*High–Procedural	0.038^{**}	0.125^{**}	0.283^{***}	0.175^{**}	0.119^{**}
Wald $\chi^2(1)$ (p-value)	2.04^{**} (0.15)	1.56(0.21)	1.53(0.22)	0.58(0.44)	$3.19^* (0.07)$

Table 11Heckman selection model

This Table reports results of linear two-step Heckman regressions. Columns (i) through (v) report results of regressions whose dependent variables are CONTINGENT-CONTROL-RIGHTS, CONTINGENT-BOARD-RIGHTS, CONTINGENT-VOTING-RIGHTS, CONTINGENT-LIQUIDATION-RIGHTS, and CONTINGENT-TERMINATION-RIGHTS. All variables are defined in Table 1. Panels A and B report results for the full sample. Panel A uses the base model, with no excluded variables. Panel B uses the augmented model, with three excluded variables. At the bottom of panel B we report a Wald test for the joint significance of the three excluded variables. Panels C and D report results for outcome regression in the broad and narrow foreign subsamples, respectively. They report only the coefficients of TRUST interacted with a dummy equal to one if a deal is domestic (TRUST-DOMESTIC) or foreign (TRUST-FOREIGN), and the coefficient for FOREIGN–DEAL. In Panel C the interaction is based on the broad foreign subsample definition. In Panel D the interaction is based on the narrow foreign subsample definition. The model specification for the outcome equation is the same as in Table 8. Investor controls include a dummy for whether the venture firm is independent or captive, the venture firm's size (VC-SIZE) and age (VC-AGE), and investor nationality. Company controls are complete sets of dummies for each company's country, industry and stage. The model specification for the (unreported) selection equation is the same as in Table 4. We report the coefficients for TRUST, TRUST-DOMESTIC, TRUST-FOREIGN, and FOREIGN-DEAL only. For each independent variable, we report the estimated coefficient and the z-score (in parenthesis) computed using (Huber-White) heteroskedasticity-robust standard errors, clustered by country-dyad. Values significant at the 1%, 5% and 10% level are identified by ***, **, *.

	Index	Board	Voting	Termination	Liquidation
	(i)	(ii)	(iii)	(iv)	(v)
	0.061***	0.011	0.025***	0.025***	0.015**
Irust	(3.19)	(1.63)	(3.70)	(3.68)	(2.19)
T C ···	0.241	-0.041	-0.126	0.922**	1.154***
Information	(0.23)	(-0.11)	(-0.35)	(2.52)	(3.18)
	-2.851	-1.078	0170	0.159	-0.171
GDP Difference	(-1.37)	(-1.43)	(0.23)	(0.22)	(-0.23)
	0.077	-0.469^{**}	0.315^{*}	0.216	0.239
Language Overlap	(0.11)	(-2.52)	(1.80)	(1.18)	(1.32)
Land D'ffarmer	0.001	0.160	-0.215^{*}	-0.111	-0.134
Legal Difference	(0.00)	(1.24)	(-1.76)	(-0.88)	(-1.07)
Distance	-0.062^{***}	0.002	-0.024^{***}	-0.023^{***}	-0.006
Distance	(-3.29)	(0.25)	(-3.71)	(-3.37)	(-0.89)
Esseine Deel	1.446*	-0.223	1.002***	0.690**	0.561*
Foreign Deal	(1.70)	(-0.72)	(3.38)	(2.24)	(1.84)
Comment Davidar	-0.639^{**}	-0.120	-0.048	-0.257^{**}	-0.256^{**}
Common Border	(-2.29)	(-1.18)	(-0.50)	(-2.52)	(-2.52)
L. J. Str.	0.509**	0.166^{*}	0.006	0.286^{***}	0.41
Industry Fit	(2.05)	(1.89)	(0.06)	(3.24)	(0.48)
Stome Et	0.465^{***}	0.221^{***}	0.083	0.227^{***}	-0.38
Stage FIL	(2.61)	(3.42)	(1.36)	(3.50)	(-0.60)
Investor Controls	Included	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included	Included
		SELECTION	I EQUATION		
Turat	0.028***	0.031***	0.028***	0.031***	0.031***
Trust	(5.33)	(6.22)	(5.37)	(5.93)	(6.04)
Investor FE	Included	Included	Included	Included	Included
Control Variables	Included	Included	Included	Included	Included
 ۱/(:۱۱)	0.470**	0.050	0.055	0.212***	0.112***
Millis λ	(4.01)	(1.21)	(1.36)	(5.12)	(2.75)
Observations	107,388	107,388	107,388	107,388	107,388
Realized deals	1,064	1,129	1,091	1,103	1,124
Wald χ^2	632.58	531.20	560.13	420.71	427.48

Panel A: FULL SAMPLE – BASE MODEL

	Index	Board	Voting	Termination	Liquidation
	(i)	(ii)	(iii)	(iv)	(v)
	0.076***	0.010	0.031***	0.028***	0.018**
Trust	(3.11)	(1.17)	(3.92)	(3.28)	(2.13)
T C III	0.419	0.460	-0.519	1.436**	0.768
Information	(0.24)	(0.73)	(-0.91)	(2.34)	(1.31)
	-1.180	-0.660	0.485	0.291	1.866
GDP Difference	(-0.34)	(-0.52)	(0.42)	(0.24)	(1.58)
	0.808	-0.320	0.437***	0.511**	0.432^{*}
Language Overlap	(1.27)	(-1.36)	(2.09)	(2.23)	(1.97)
1 I.D.'#	-0.744	0.141	-0.465^{***}	-0.309^{*}	-0.494^{***}
Legal Difference	(-1.56)	(0.81)	(-2.97)	(-1.82)	(-3.04)
	-0.018	0.010	-0.011	-0.005	0.001
Distance	(-0.91)	(1.45)	(-1.64)	(-0.75)	(0.05)
	2.801**	-0.146	1.516***	1.080***	0.817**
Foreign Deal	(2.58)	(-0.37)	(4.26)	(2.78)	(2.20)
Commen Deviler	-0.794*	-0.321**	0.098	-0.378^{**}	-0.297^{**}
Common Border	(-1.88)	(-2.05)	(0.71)	(-2.45)	(-2.02)
Induction Dit	0.061	0.040	-0.162^{*}	0.120	0.048
Industry Fit	(0.23)	(0.39)	(-1.83)	(1.23)	(0.51)
Store Et	0.195	0.098	0.074	0.096	-0.082
Stage FIL	(0.98)	(1.33)	(1.29)	(1.35)	(-1.20)
Investor Controls	Included	Included	Included	Included	Included
Company Controls	Included	Included	Included	Included	Included
		SELECTION	EQUATION		
Trust	0.025^{***}	0.028^{***}	0.024^{***}	0.027^{***}	0.027^{***}
11030	(3.22)	(3.77)	(3.14)	(3.52)	(3.47)
FDI	1.148^{**}	1.627^{***}	1.145^{**}	1.635^{**}	1.624^{***}
I'DI	(2.54)	(3.35)	(2.54)	(3.78)	(3.77)
Exports	3.499^{***}	3.781^{***}	3.628^{***}	3.663^{***}	3.744^{***}
Пурона	(3.07)	(3.35)	(3.20)	(3.23)	(3.31)
Solicitation	-0.216^{***}	-0.214^{***}	-0.216^{***}	-0.215^{***}	-0.216^{***}
Solicitation	(-3.70)	(-3.70)	(-3.70)	(-3.72)	(-3.72)
Investor FE	Included	Included	Included	Included	Included
Control Variables	Included	Included	Included	Included	Included
Mills)	0.175	0.017	-0.053	0.069	0.076^{*}
	(1.39)	(0.38)	(1.28)	(1.56)	(1.79)
Observations	81,993	81,993	81,993	81,993	81,993
Realized deals	835	884	852	868	879
Wald $\chi^2(52)$	642.97	428.95	780.64	400.93	448.25
Wald $\chi^2(3)$	54.26	38.25	52.59	53.49	37.11

Panel B: FULL SAMPLE – AUGMENTED MODEL

	Index	Board	Voting	Termination	Liquidation
	(i)	(ii)	(iii)	(iv)	(v)
	Poisson	Logit	Logit	Logit	Logit
BASE MODEL					
Trust-Domestic	0.063^{***}	0.012^{*}	0.026^{***}	0.025^{***}	0.017**
	(3.32)	(1.76)	(3.87)	(3.66)	(2.45)
Trust-Foreign	0.056^{***}	0.010	0.023^{***}	0.024^{***}	0.014^{**}
	(2.95)	(1.49)	(3.49)	(2.43)	(2.08)
Foreign Deal	1.633^{*}	-0.193	1.069^{***}	0.6725^{**}	0.568^{*}
	(1.93)	(-0.63)	(3.63)	(2.36)	(1.88)
AUGMENTED MODEL					
Trust-Domestic	0.081***	0.012	0.033***	0.029***	0.020**
	(3.39)	(1.34)	(4.21)	(3.39)	(2.40)
Trust-Foreign	0.073^{***}	0.021	0.031^{***}	0.027**	0.017^{**}
	(3.05)	(1.23)	(3.91)	(3.12)	(2.06)
Foreign Deal	3.039^{***}	-0.134	1.579^{***}	1.139^{***}	0.864^{**}
	(2.83)	(-0.34)	(4.48)	(2.95)	(2.36)

Panel C: BROAD FOREIGN SUBSAMPLE

Panel D: NARROW FOREIGN SUBSAMPLE

	Index	Board	Voting	Termination	Liquidation
	(i)	(ii)	(iii)	(iv)	(v)
	Poisson	Logit	Logit	Logit	Logit
BASE MODEL					
Trust-Domestic	0.089***	0.018**	0.029***	0.033***	0.023(**
	(4.31)	(2.31)	(3.88)	(4.34)	(2.99)
Trust-Foreign	0.039^{*}	0.006	0.021***	0.019**	0.008
	(1.89)	(0.85)	(2.98)	(2.49)	(1.11)
Foreign Deal	3.216^{***}	0.178	1.266***	1.169***	1.042***
	(3.13)	(0.48)	(3.52)	(3.18)	(2.86)
AUGMENTED MODEL					
Trust-Domestic	0.112^{***}	0.021**	0.037^{***}	0.034^{***}	0.022**
	(4.19)	(2.25)	(4.15)	(3.55)	(2.43)
Trust-Foreign	0.036	-0.002	0.025^{***}	0.022**	0.012
	(1.33)	(-0.21)	(2.83)	(2.24)	(1.29)
Foreign Deal	4.913***	0.514	1.826^{***}	1.381***	1.074^{**}
	(3.88)	(1.12)	(4.38)	(3.08)	(2.51)

Figure 1: Trust and VC market size



This figure shows the relationship between countries' trust and the size of their venture capital market. Each observation represents a country in our dataset. Trust (received) is the average percentage of people who expressed high trust in the Eurobarometer data. A value of 20 means that on average 20% of people expressed high trust. VC market size is measured as the total venture capital investments made divided by the country's population, for the period 1998-2001. A value of 0,1 means that venture total venture capital investments represent 0.1% of GPD.