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Abstract

We argue that social dilemmas structured as investment trust games are a dominant feature in social and economic life due to asymmetric information, incomplete contracts and non-overlapping competencies that are typical characteristics of business relationships. We therefore consider that borrowers living in geographical areas with higher interpersonal trust are more likely to overcome the coordination failures typical of this kind of social dilemmas, thereby creating higher economic value and reducing the risk of their economic activity. Our empirical findings support this hypothesis showing that lenders charge significantly lower loan costs on borrowers living in areas characterized by higher interpersonal trust.

1. Introduction

Trust is the investor's willingness to make herself vulnerable to others' action.

Hong and Bohnet (2007)

"An individual (let's call her the trustor or investor) trusts if she voluntarily places resources at disposal of another party (the trustes) without any legal commitment from the latter".

Fehr (2009)

Asymmetric information, incomplete contracts and non-overlapping competencies are three typical ingredients of most social and business relationships. In one of his most famous quotes David Hume, the Scottish philosopher, argues that these conditions may create a typical social dilemma leading to cooperation failure and suboptimal outcomes.[1]

The game theoretical literature has built some well-known games around these dilemmas (ie. the Prisoner's dilemma, the Centipede game, the Trust Investment game, etc.). In the Trust Investment game (Berg et al., 1995) players' act sequentially and a first mover (the trustor) chooses whether to share or not part of her endowment with a second player (trustee). The amount transferred by the trustor is multiplied by three. The trustee has the second and final move in the one shot version of the game where she has to decide whether to give back or not part of what received by the trustor. The Nash equilibrium of the game when purely self-regarding preferences are common knowledge is a coordination failure where the first player's optimal strategy is a zero transfer as she anticipates that the purely self-regarding second player would not return anything. As a consequence, the two players

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[1] *Your corn is ripe to-day; mine will be so tomorrow. It is profitable for us both, that I should labour with you to-day, and that you should aid me to-morrow. I have no kindness for you, and know you have as little for me. I will not, therefore, take any pains upon your account; and should I labour with you upon my own account, in expectation of a return, I know I should be disappointed, and that I should in vain depend upon your gratitude. Here then I leave you to labour alone: You treat me in the same manner. The seasons change; and both of us lose our harvests for want of mutual confidence and security. .» (Hume Treatise on Human Nature, 1740, book III).*

(trustor and trustee) are trapped into a Nash equilibrium that is Pareto dominated by solutions where both players choose a positive transfer and "trust pays" (ie. the trustor receives more than she gives). These Pareto superior solutions require interpersonal trust (ie. the first player chooses a nonzero transfer if she trusts the second player and if the latter is trustworthy) and therefore, in the trust investment game perspective, interpersonal trust has a positive and significant effect on the final payoffs of the game. The empirical literature of the trust investment game has shown that players choose nonzero positive transfers and their transfers (and therefore interpersonal trust) are affected by several drivers such as strategic altruism, pure altruism, inequity aversion, risk aversion, betrayal aversion (Bohnet, Greig, Herrmann, & Zeckhauser, 2008; Fehr, 2009) and guilt aversion for the trustor, while pure altruism (Cox, 2004), inequity aversion, guilt aversion and reciprocity for the trustee if we limit our analysis to one shot versions of the trust game (for a meta-experiment collecting a large number of experimental results of this literature see Johnson and Mislin, 2011).

Several reasons lead to conclude that social dilemmas like the trust game mimic what happens in social and business relationships and that interpersonal trust is crucial, exactly as in trust games, in these relationships to produce cooperation and superior economic outcomes. Kenneth Arrow (1974) argues that trust is "an important lubricant of the social system It is extremely efficient; it saves a lot of trouble to have a fair degree of reliance on other people's word. Unfortunately this is not a commodity which can be bought very easily"[2]. Knack and Keefer (1997) document a positive link between trust and per capita GDP at cross-sectional country level. Becchetti and Pace (2006) and Fullenkamp and Chami (2002) find a positive relation among trust, trustworthiness and firm productivity. Guiso et al (2009) find that trust has a positive effect on financial development and foreign trade (ie., intercountry trust has a significant effect on bilateral trade relationships). Alesina and La Ferara (2005) and Montalvo and Reynal-Querol (2005) illustrate how trust affects interethnic economic relationships and therefore economic performance. Becchetti and Conzo (2011)

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[2] Arrow, K:, (1974), The limits of organisation, Norton & Company, New York. p.22.

demonstrate in a trust game experiment that creditworthiness is a signal of trustworthiness. They show that in a Buenos Aires suburb trustors give significantly more to microfinance members than to non members anticipating that the former are more trustworthy since, by being members, they have been evaluated as trustworthy by a lending institution. In this way loan concession by microfinance lenders generates a virtuous circle by which the "prophecy" of borrower's solvency can be self-fulfilling.

In our paper we transform these considerations into a research hypothesis. We argue that business relationships have characteristics akin to those of trust investment games. Hence, in geographical areas with lower interpersonal trust lenders anticipate that potential borrowers have lower probability to escape coordination failures such as those of the trust investment game Nash equilibrium. By anticipating that this makes them riskier, lenders will charge higher costs when lending to borrowers in areas with lower interpersonal trust.

Our empirical findings do not reject this hypothesis. Domestic interpersonal trust has a significant and negative effect on the cost of loans, net of the impact of all relevant concurring factors such as borrower and loan characteristics and fixed effects. Among them we include trust in the legal system that is both another dimension of trust and a proxy of the quality of the legal system that is expected to have a significant impact on lending risk (ie., it affects the expected length of civil controversies between lenders and borrowers and the expected value of borrowers' collateral in case of default). However, in the logic of the trust investment game (our theoretical benchmark), trust in the legal system does not eliminate the importance of interpersonal trust since large part of social and business relationships occur in "grey areas" where violation of trust is not covered by legal contracts and therefore cannot be sanctioned.

The contribution that is closer to our research is from Hasan et al. (2017) showing that social capital, measured with the percent of voters in US counties, has a statistically significant and negative effect on the cost of loan. Our work innovates with respect to this fundamental contribution by looking at

European countries and by using a measure of social capital, interpersonal trust, that better represents (as outlined in the section that follows) our theoretical assumption of economic life made of social dilemmas having features of trust investment games. In addition to it and as mentioned above, we compare the impact of different dimensions of social capital by verifying whether the importance of interpersonal trust is robust when controlling for the role of trust on the legal system.

2. Theoretical benchmark

For simplicity and without lack of generality, we assume that the outcome of the borrower's investment project is the result of a two-player trust game process where the borrower plays the role of trustor and the borrower's business partner the role of trustee. This means that, in order to produce her business outcome, the borrower interacts with another player with non-overlapping competences in a framework of asymmetric information and incomplete contracts. The trustee is therefore intended to be a business partner whose skills and cooperation contribute significantly to the outcome of the project. As in the standard trust game this second player may decide to reciprocate or not when she receives the contribution from the first player (the borrowing trustor). The superadditivity factor of the trust game implies that the contribution of the borrowing trustor is multiplied by 3 when it is sent to the second player. The logic is that the combination of competences triggered by trustor's contribution creates added value because of complementarities and economies of scale in the combination of the two players' skills.

Following the standard parameters of a trust investment game the borrower (trustor) payoff is $\omega_1 - x + y$, while the business partner (trustee) payoff is $\omega_2 + 3x - y$, where x (y) is the trustor's (trustee's) contribution, ω_i $i=1,2$ stands for the i-th player's endowment and $\omega_1 = \omega_2$.

We assume the investment is bank financed and that $\omega_1+\pi>D>\omega_1$, where D is the cost of loan including interest payments, $\pi=\alpha(x*3)-\omega_1$, with α between $\in [0,1]$ being the share of trustor contribution that the trustee gives back to the trustor and π the borrower's total profit from the trust game. This condition implies that the loan can be repaid only if the trust game between the borrower and her partner produces a gain not lower than π (a necessary condition for that is that the trustor giving is nonzero and trust "pays", or $y\geq x$). Note that, as a consequence, under the Nash equilibrium of the game (0,0) the debt is never repaid.

We assume that, in areas with higher interpersonal trust, x and y are higher and trust pays ($y\geq x$). To make it simple, we assume that $p_y(y>x)$ is higher in areas of higher interpersonal trust. Hence players are more likely to trust and to be trustworthy. This implies that the probability that the loan will be repaid is higher and the borrower's risk is lower for the bank in areas with higher interpersonal trust.

2.1 The trust investment game with partial legal protection

Assume now that the following socially optimal cooperative equilibrium ($\omega_1, 2\omega_1$) leading to a payoff of $2\omega_1$ for each player, and Pareto superior to the Nash Equilibrium (0,0), is imposed by legal contract and deviation from it can be successfully prosecuted with probability p_p.[3] We assume that, in case of successful prosecution, the trustee loses all her payoff.

Hence the trustee's payoff, conditional to her giving less than what fixed contractually, becomes

$(1- p_p)[3\omega_1-y] \mid y<2\omega_1$

while, when not breaching the contract, the trustee's payoff is

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[3] In alternative, we may assume that prosecution is fully effective but only a part $p_p <1$ of trustee's action affecting its contribution y can be regulated by contracts. Results are equivalent.

$3\omega_1-y \mid y\geq 2\omega_1$

We conveniently assume that, the higher the quality of the legal system, the higher players' trust on it and therefore the value of p_p. Under this framework it is clear that both interpersonal trust and trust on the legal system contribute to the final trust game payoff.

In Figure 1 we present a case where p_p is low and the optimal strategy for the trustee with purely self-regarding preferences (ie. maximizing her own payoff) is still $y=0$, unless she has other-regarding preferences (ie. inequity aversion, altruism, reciprocity). If this is the case, we assume that the borrower acting as a trustor in the trust investment game may anticipate it and choose $x \neq 0$. Hence, interpersonal trust is required in addition to legal contracts to enforce the socially optimal outcome that ensures loan repayment from the borrower. In Figure 2 the legal system is strong enough to enforce the socially optimal outcome and interpersonal trust is not required.

3. Research hypothesis

H_0: *living in areas with higher interpersonal trust reduces borrower's cost of loan*

If business relationships have the characteristics of the social dilemma described in the trust investment game lenders anticipate that borrowers living in regions where interpersonal trust is higher are less risky in the sense that they are more likely to develop successful business relationships. In the logic of the model developed in the previous section higher interpersonal trust raises the probability that players find cooperative equilibria generating payoffs that can repay debt financed investment.

The maintained assumption of our hypothesis is that the four main features of investment trust game apply. More specifically, i) business relationships occur in a framework of asymmetric information where it is impossible to forecast without error the future behavior of business partners, ii) legal

contracts are incomplete so that many contingencies of business relationships are not covered by contract clauses and therefore abuses of trust in these contingencies cannot be prosecuted; iii) business partners have non overlapping competences so that they need each other to improve their business and therefore lack of cooperation preventing matching of competences significantly reduces the final outcome; iv) cooperation has superadditive effects, that is, its result is superior to the sum of the stand-alone business partners' outcomes.

H_1: *the significant effect of interpersonal trust occurs net of the effect of trust in the legal system*

If, together with the other three conditions stated in *H0*, the maintained assumption ii) of the previous research hypothesis holds (incomplete contracts), or if enforcement of legal contracts and sanctions related to its violation are imperfect, interpersonal trust plays a role even after controlling for trust in the legal system. This is because, in the logic of the trust investment game, it is crucial for creation of value in those "grey areas" where there is no coverage of legal contracts, as it is the case in most social and economic interactions and in trust investment games played in the labs.

4. Data sources

In order to test our hypothesis, we extract information from three different datasets. Our measure of trust comes from a question of the European Social Survey (ESS), a cross-national survey conducted every two years in the European Union since 2001 measuring attitudes and beliefs in European countries together with standard socio-economic characteristics. More specifically, our measure of trust in a given country comes from the question having the following extremes "*Most people can be trusted"* and *"you can't be too careful*" where respondents are asked to give a grade going from a minimum value of 1 ("you can't") until a maximum value of 10 ("Most people").

The external validity of this measure of trust has been widely discussed in the literature given its extensive use. In particular, Gleaser (2000) questions the validity of the WVS trust measure by arguing that it is not correlated with senders' behavior in the standard trust game. On the other side, Fehr et al. (2003) find the opposite result: WVS measures of trust are correlated with sender behaviour, but not with her trustworthiness. Sapienza et al. (2013) provide an answer to the puzzle claiming that the WVS question is able to capture the belief-based component of trust and is a good measure of the expectation-component of trust in economically-relevant situations. We therefore conclude that this variable is the best proxy to verify our research hypothesis formulated on the basis of the trust investment game theoretical benchmark. More specifically, and consistently with Sapienza et al. (2013) conclusions, we assume that lenders are aware of the interpersonal trust of a given region proxied by the WVS measure and formulate on it their beliefs on the probability that the borrower will achieve cooperative equilibria with her business partner generating outcomes that can repay the debt.

Information on loans is retrieved by the Dealscan database. The dataset is widely used in the banking literature and contains detailed information on syndicated loan pricing and characteristics of both borrowers and lenders. Our basic unit of observation is the credit facility. Each loan package includes several facilities that are different for their purpose and type. Most of them are standard credit lines (almost half of the sample) or term loans. Last, information on firm and bank characteristics have been downloaded from Compustat.

Our final dataset includes 4571 credit facility observations and information on 1261 firms that issued at least a syndicated loan in the spanning period going from 2005 to 2016. In Table 1 we report the main variables relevant to our empirical analysis that are included in our merged dataset. Table 2 reports the country distribution of our sample.

5. Descriptive statistics

Summary statistics are reported in Table 3. Our variable of interest, interpersonal trust, is on average equal to 5.09, ranging from a minimum of 2.72 (Turkey) to a maximum of 6.80 (Denmark). Average population trust by country is reported in Figure 3. Our measure of loan cost, the "All-in Spread Drawn", is on average equal to 205 bps. It is measured considering one hundred percent usage of the credit facility and it is quoted over LIBOR. Maturity is expressed in months and it is on average equal to 60 months. The facility amount and total assets are expressed in millions of dollars and their mean values are respectively equal to 1,055.60 and 37,702. Borrower's balance sheet summary statistics are also reported in Table 2. The mean return on investment is around 10 percent, the proportion of cash over total assets is on average equal to 0.22 and the proportion of debt over total capital is on average equal to 0.77.

6. Econometric analysis

In order to test our research hypothesis, we estimate the following specification:

$$Log(All - in\ Spread)_{i,t}$$

$$= \alpha + \beta_1 ln(Interpersonal\_Trust)_{i,t} + \beta_2 ln(Trust\_on\_Legal\_Institutions)_{i,t}$$

$$+ \sum_{j=1}^{n(\gamma)} \gamma_j\ Firm\ Characteristics_{ji,t} + \sum_{h=1}^{n(h)} \delta_h\ DLoan\ Type_h$$

$$+ \sum_{l=1}^{n(l)} \vartheta_l\ DLoan\ Purpose_l + \sum_{m=1}^{n(m)} \zeta_m\ DCountry\ of\ Sindication_m$$

$$+ \sum_{p=1}^{n(p)} \eta_p\ DCountry\ _p + \sum_{r=1}^{n(r)} \lambda_r\ DIndustry\ _r + \sum_{s=1}^{n(s)} \xi_s\ DYear_s + \varepsilon_{i,t}$$

where our dependent variable is, the comprehensive measure of the cost of lending represented by the all-in spread drawn.

Our key regressor (*Interpersonal_Trust*) is the average WVS measure of interpersonal trust for the given country-year described in section 4. Our controls include average self-declared trust on the legal system for the considered country-year available in the European Social Survey (*Trust_on_Legal_System*) and a list of variables measuring firm and loan characteristics. Among firm characteristics we include return on investment, cash/total assets, leverage (total liabilities/total assets), and total assets as a proxy of size. For what concerns loan characteristics, we control for loan maturity and for the facility amount, which are crucial drivers of the bank loan cost. We also control for the heterogeneity in loan types (controlling for the breakdown of loan and lender characteristics as described in the variable legend of Table 1) and the share of individuals with a University degree in the country.

The model includes country fixed effects, year fixed effects in order to account for time related macroeconomic shocks and industry fixed effects using the two digits of the primary SIC code in order to control for heterogeneous industry related risk components affecting the loan cost. We also include lender characteristics, measured as number of lenders taking part to the syndicated loan, and

country of loan syndication, in order to control for the legal environment of the country where the syndicated loan is issued. We finally include borrower fixed effects, in order to control for time invariant firm characteristics of the latter.

7. Results

Findings presented in Table 4 show that our main variable of interest (interpersonal trust) is negative and statistically significant in each considered specification. According to coefficients estimated in our fully-augmented model, a one standard deviation increase in interpersonal trust is associated with a decrease in the bank loan cost of 48 bps. The effect of local social capital on the bank loan cost is larger with respect to the result obtained by Hasan et al. (2017) that find that a standard deviation increase in social capital is associated with a decrease in the bank loan cost of 12.5 bps. A likely rationale for this difference is that in our sample we are comparing borrowers from all around the world. Given that cross-country variability of social capital is higher than that among US member states one standard deviation increase in social capital is expected to affect more the cost of credit.

When including in our fully-augmented model trust in legal system we find, as expected, that this variable has beneficial effects on the cost of debt as well, even though its presence in the estimate does not eliminate the significance of interpersonal trust. This is consistent with our second null hypothesis and the second version of the model presented in our theoretical benchmark section 2.1 where violations of trust are imperfectly sanctioned.

Among other controls we find that the facility amount and firm size have a negative and statistically significant impact on bank loan cost, as it has been found in previous studies (e.g., Hasan et al.,2017). Our measure of leverage (total liabilities/total assets) has, as expected, a positive and significant effect

on the dependent variable indicating higher financial risk. Profitability (return on equity) reduces such risk and has therefore a negative and significant effect on the cost of debt.

8. Identification Strategy

Our econometric findings indicating a significant and negative correlation between interpersonal trust and cost of debt do not eliminate per se the suspicion of an endogenous relationship where a third driver may cause both higher local interpersonal trust and lower cost of debt.

In order to overcome this problem, we follow the literature and propose as identification strategy the use of religion as an instrument (e.g., Guiso et al., 2003). Our measure of religion comes as well from the European Social Survey and measures the intensity of religious beliefs through the following question "How religious are you?". Variable values range from 0 for the answer "Not at all" up to a value of 10 for the answer "Very Religious".

Religion may definitely be considered a relevant instrument for interpersonal trust since religious norms praise trust and blame trust betrayal, thereby contributing to create and reinforce domestic social norms against lack of positive reciprocity and in favor of trust. In addition to it, believers have stronger moral norms that act as deterrent for lack of trustworthiness increasing the disutility of lack of positive reciprocity.[4] Religion can as well be considered a valid instrument since there is no reason to expect that the intensity of religious beliefs in a country affects per se corporate cost of debt. Several tests confirm the validity of our instrument. More specifically, the F-test is much higher than the well-known critical value of 10 and it is as well higher than the value suggested by Stock and Yogo (2015), confirming the hypothesis that our instrument is strong. The Kleibergen-Paap rk LM statistics as well rejects the null hypothesis that the model is under-identified. Results are reported in

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[4] We talk about positive reciprocity since religions (expecially the Christian one) are also against negative reciprocity as in the famous "cheek" say (If someone slaps you on one cheek, turn to them the other also).

Table 5. Again, the coefficient is still negative and statistically significant, signaling that our analysis is not affected by endogeneity.

9. Conclusions

There is growing consensus in the economic literature on the role of trust and trustworthiness as main pillars of social capital and on the fact that the social capital is one of the most important factors ensuring success of economic activity at individual and aggregate levels. If trust and trustworthiness are so important for entrepreneurial success they should also be taken into account by rational lenders when evaluating risk and probability of success of screened would-be borrowers.

Based on this intuition we outline in the paper a theoretical benchmark assuming that business relationships have the standard features of investment trust games, that is, they occur in a framework of asymmetric information, incomplete contracts and non overlapping competences. In such framework bank financed investors should pay higher cost for loans in areas where social capital is lower and therefore the probability of having business partners with lower levels of reciprocal trust is higher.

Our econometric findings do not reject our research hypothesis showing that the cost of loans is significantly lower where interpersonal trust is higher, net of the impact of a wide range of controls including loan type and purpose, borrower characteristics, country of syndication plus industry, borrower, country and year effects. Econometric results are robust to endogeneity concerns when using instrumental variables.

Our findings identify in the literature an additional channel on the effect of social capital on economic activity that reinforces the positive nexus between the two variables. They show that social capital positively affects it not only directly but also indirectly via higher cost of loans when investment is

bank financed. Our findings suggest at least two plausible policy implications: bank regulators should take into account social capital as a factor reducing lending risk when defining correcting factors for bank reserve requirements and policies aiming to develop social capital (ie. social capital accelerators) could have the additional positive effect of reducing cost of external finance for local investors.

References

- Arrow, K:, (1974), The limits of organisation, Norton & Company, New York.

- Alesina, A. and La Ferrara, E. (2005) Ethnic Diversity and Economic Performance, *Journal of Economic Literature*, 43, 762-800.

- Berg J., Dickaut J. and McCabe K. (1995). Trust, reciprocity and social history. Games and Economic Behaviour 10: 122-42.

- Bohnet, I., Greig, F., Herrmann, B., & Zeckhauser, R. (2008). Betrayal aversion: Evidence from Brazil, China, Oman, Switzerland, Turkey, and the United States.

- American Economic Review, 98, 294–310.Johnson, Noel D., and Mislin A., (2011)"Trust games: A meta-analysis." Journal of Economic Psychology 32.5: 865-889.

- Becchetti L. Conzo P. (2011), ", 2011, Creditworthiness as a signal of trustworthiness", Journal of Public economics, Volume 95, Issues 3-4, pp. 265-278.

- Berg, Tobias, Anthony Saunders, and Sascha Steffen. "The total cost of corporate borrowing in the loan market: Don't ignore the fees." *The journal of finance* 71.3 (2016): 1357-1392.

- Cox, J. C. (2004). How to identify trust and reciprocity. Games and Economic Behavior, 46(2), 260–281.

- Glaeser, Edward L., et al. "Measuring trust." *The quarterly journal of economics* 115.3 (2000): 811-846.

- Fehr, E. (2009). On the economics and biology of trust. Journal of the European Economic Association, 7(2–3), 235–266.

- Fehr, Ernst, et al. "A nation-wide laboratory: Examining trust and trustworthiness by integrating behavioral experiments into representative survey." (2003).

- Hasan, Iftekhar, et al. "Social capital and debt contracting: Evidence from bank loans and public bonds." *Journal of Financial and Quantitative Analysis* 52.3 (2017): 1017-1047.

- Guiso, L. Sapienza, P., Zingales, L. (2009). Cultural biases in Economic Exchange? Quarterly Journal of Economics 124 (3): 1095-1131.

  Knack, S., & Keefer, P. (1997). Does social capital have an economic payoff? A cross-country investigation. Quarterly Journal of Economics, 112, 1251–1288

- Montalvo, G. and Reynal-Querol, M. (2005) Ethnic Diversity and Economic Development, *Journal of Development Economics*, 76, 293-323.

- Paola Sapienza & Anna Toldra-Simats & Luigi Zingales, 2013. "Understanding Trust," Economic Journal, Royal Economic Society, vol. 123(12), pages 1313-1332,

Figure 1. Trustee's payoff in the trust investment game (low enforcing capacity of the legal system)

$(1-p)(3\omega_1-y)$

$3\omega_1-y$

$2\omega_1$

y
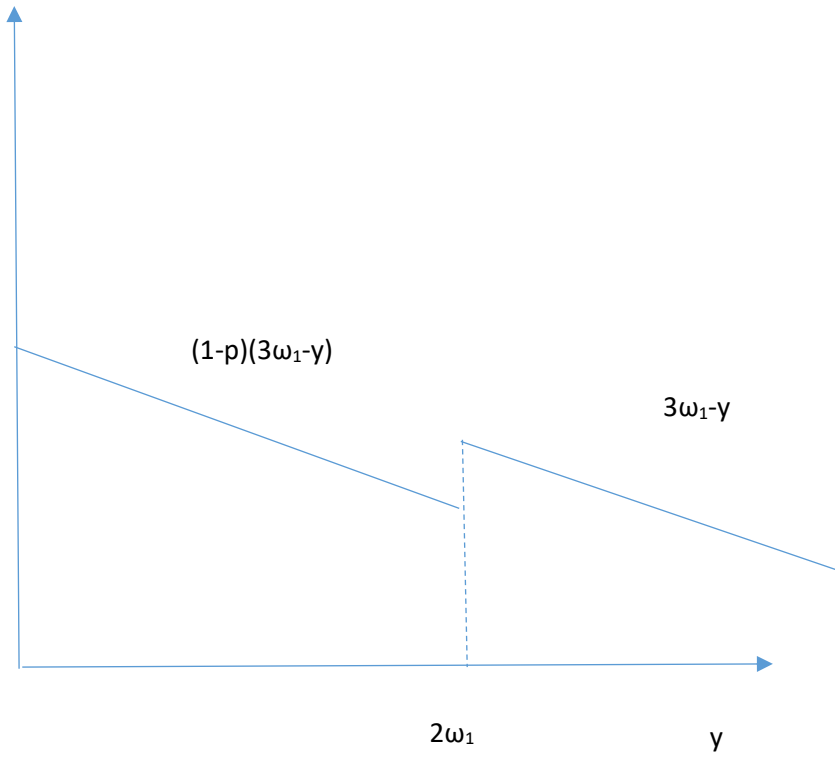
Horizontal axis: trustee's contribution. Vertical axis: trustee's payoff

Figure 2. (high enforcing capacity of the legal system)

$(1- p_p)(3\omega_1-y)$

$3\omega_1-y$

y

$2\omega_1$
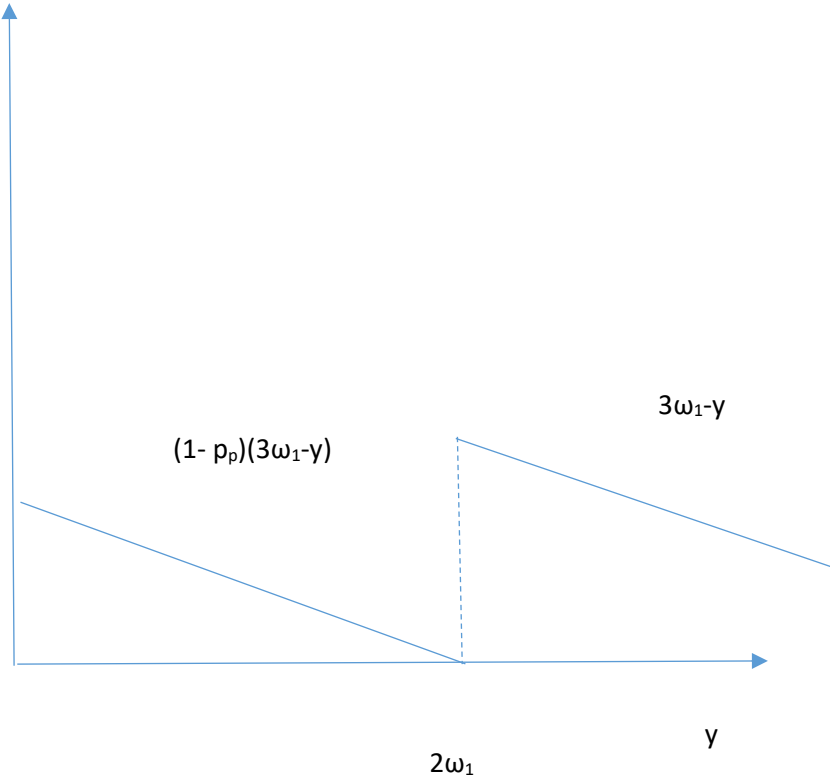
Horizontal axis: trustee's contribution. Vertical axis: trustee's payoff

Figure 3. Population trust across country
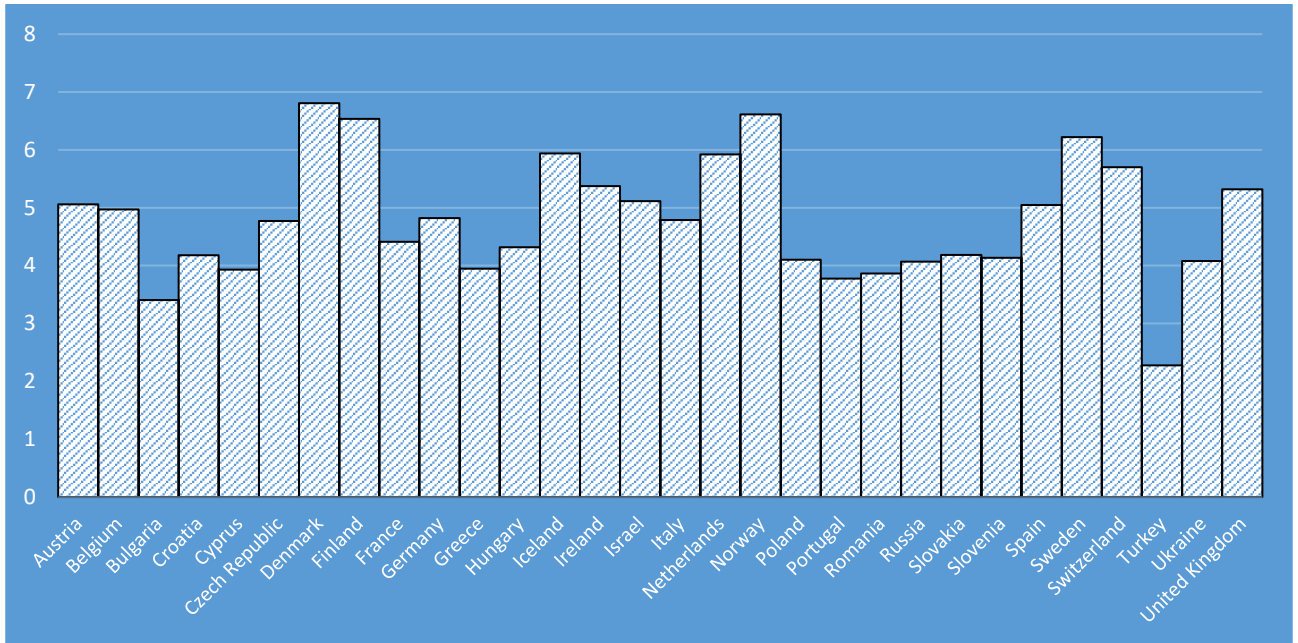
This table reports the variables included in the dataset. In particular, Panel A reports loan characteristic variables. Panel B reports firm's characteristic variables. Panel C reports trust related variables. These variables belong to two different datasets: European Social Survey and Compustat.

Panel A: Loan Characteristics

Variable name	Definition
All-in Spread Drawn	Amount paid in bps over LIBOR for each dollar drawn
Log (All-in Spread Drawn)	Logarithm of the variable "All-in drawn"
Facility amount	Amount of the facility in dollar
Maturity	Number of months the facility will be active since the starting date
Purpose of the Loan	Main purpose of the facility (Acquisition Line, Aircraft finance, CP backup, Capital expenditures, Corporate Purposes, Debt Repayment, Defensive bid, Exit financing, Guarantee, IPO, Merger, Real estate, Recap., Restructuring, Securities Purchase, Ship finance, Spinoff, Stock Buyback, Takeover, Trade Finance, Work. Cap.)
Country of syndication	Country in which the loan has been syndicated (Australia, Austria, Belgium, Bermuda, Brazil, Canada, Chad, Chile, China, Czech Republic, Denmark, Dominican Republic, Egypt, Finland, France, Germany, Ghana, Greece, Hong Kong, India, Ireland, Israel, Italy, Japan, Jordan, Kazakhstan, Korea (South), Liberia, Luxembourg, Mexico, Mongolia, Netherlands, New Zealand, Norway, Peru, Philippines, Poland, Portugal, Qatar, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, USA, United Arab Emirates, United Kingdom, Uzbekistan)

Panel B: Firm Characteristics

Variable name	Definition
Company	Company name
Country	Country of the company headquarter (See Table 2)
Industry	Industry in which the firm operates according to the two digits of the SIC code
Total Debt/Total Capital	Ratio of Total Debt over Total Capital
Return on Equity	Net income returned as a percentage of shareholders' equity
Cash/Total Capital	Proportion of cash over total capital
Total Assets	Total Assets of the company

Panel C: Trust

Variable name	Definition
Interpersonal Trust	Interpersonal trust
Trust in Legal System	
Religion Intensity	

Table 2. (Country DIstribution)

Country name	Counts	Percentage	Cumulative
Austria	11	0.24	0.24
Belgium	64	1.40	1.64
Bulgaria	14	0.31	1.95
Croatia	1	0.02	1.97
Cyprus	9	0.20	2.17
Czech Republic	4	0.09	2.25
Denmark	56	1.23	3.48
Finland	61	1.33	4.81
France	723	15.82	20.63
Germany	586	12.82	33.45
Greece	3	0.07	33.52
Hungary	19	0.42	33.93
Iceland	5	0.11	34.04
Ireland	77	1.68	35.73
Israel	16	0.35	36.08
Italy	34	0.74	36.82
Netherlands	339	7.42	44.24
Norway	120	2.63	46.86
Poland	29	0.63	47.50
Portugal	40	0.88	48.37
Romania	4	0.09	48.46
Russia	240	5.25	53.71
Slovakia	5	0.11	53.82
Slovenia	12	0.26	54.08
Spain	416	9.10	63.18
Sweden	160	3.50	66.68
Switzerland	166	3.63	70.31
Turkey	41	0.90	71.21
Ukraine	34	0.74	71.95
United Kingdom	1,282	28.05	100.00
Total	**4,571**		**100.0**

Table 3. Descriptive statistics

	Count	Mean	SD	25th Percentile	50th Percentile	75th Percentile
All-in Drawn	4571	203.86	175.68	70	175	275
Maturity	4571	60.64	38.87	36	60	72
Interpersonal Trust	4571	5.09	0.72	4.57	5.14	5.35
Facility amount (Millions of $)	4571	1055.60	2141.50	110.66	352.39	1100
Total Assets (Millions of $)	4305	37702	88415.44	1328.52	4936.64	28517.26
ROI	4544	0.10	0.07	0.06	0.09	0.13
Cash /Total Capital	3907	0.22	0.15	0.11	0.19	0.29
Total Liabilities/Total Assets	4554	0.69	0.26	0.55	0.69	0.83
Education (% of graduates)	4281	27.31	5.10	24.4	27.6	30
Religion Intensity	4571	4.28	0.60	4.88	4.14	4.56
Trust in legal system	4571	5.28	0.83	5.00	5.21	5.75

Table 4. The effect of interpersonal trust in all in spread drawn

VARIABLES	(1) OLS	(2) OLS	(3) OLS	(4) OLS
Interpersonal Trust	-58.61**	-81.86***	-69.96***	-68.91**
	(24.54)	(25.74)	(25.38)	(28.18)
Maturity		0.544***	0.545***	0.653***
		(0.119)	(0.119)	(0.120)
Log (Facility amount)		-7.739***	-7.387***	-4.620*
		(2.624)	(2.629)	(2.384)
Log (Total Assets)		-8.617	-11.49*	-25.30**
		(6.329)	(6.464)	(10.92)
ROI		-338.9***	-327.4***	-298.6***
		(90.93)	(89.45)	(98.36)
Cash		33.39	17.42	-1.924
		(77.99)	(78.26)	(78.67)
Leverage		144.6***	138.0***	190.7***
		(40.67)	(39.42)	(44.67)
Trust in Legal System			-36.86***	-47.96***
			(10.75)	(10.99)
Education				8.682***
				(2.627)
Loan type FE	YES	YES	YES	YES
Country Of Syndication FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Country FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Firm FE	NO	NO	NO	YES
Lender FE	NO	NO	NO	YES
Constant	295.8**	607.4***	784.2***	1,013***
	(128.7)	(144.3)	(163.4)	(213.8)
Observations	4,571	4,273	4,273	3,893
R-squared	0.443	0.788	0.789	0.801

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5. Instrumental Variable

VARIABLES	IV
Interpersonal Trust	-156.9**
	(77.57)
Maturity	0.657***
	(0.100)
Log (Facility amount)	-4.812**
	(1.996)
Log (Total Assets)	-25.10***
	(9.158)
ROI	-292.9***
	(82.83)
Cash	0.419
	(66.04)
Leverage	192.9***
	(36.97)
Trust in Legal System	-36.97***
	(13.89)
Education	6.324**
	(2.987)
Loan type FE	*YES*
Country Of Syndication FE	*YES*
Industry FE	*YES*
Country FE	*YES*
Year FE	*YES*
Firm FE	*YES*
Lender FE	*YES*
Constant	1,428***
	(383.9)
Kleibergen-Paap rk LM statistic	Chi-sq(1)= 121.995
	P-val = 0.00
F test on excluded instrument	222.18
Observations	3,893
R-squared	0.800

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1