# Social Capital and Finance (2)

Lecture 6
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# The Role of Social capital

### **Channels: 1**

Social capital can effect the development of finance at least through two channels

- It can enhance trust and enforcement
- In so far as social capital constitutes a set of dense links across individuals it can foster financial development because it helps spread out information and more information is good for the development of finance

### **Channels: 2 - enforcement**

 Two ways social capital can enhance enforcement:

- through social punishment => others punish you, e.g. by exclusion from participating in the community
- through the formations of norms of behavior that constraint individuals action trough self punishment (shame, morale etc.)

### Channels: 3 – information

- Social capital can foster finance through information because :
  - It augments the quantity of available information in the economy as it spreads out through the social network at low cost
  - It increases the quality of information: since individuals can be punished by the social network they have incentives to reveal information truthfully=> can rely on it to make decisions

## **SC** and Enforcement

## How to identify this?

 Level of social capital highly correlated with many other institutional variables

=> Need to investigate this relation within a homogenous society (same institutional environment) that differ greatly in the level of social capital and trust.

=> Italy is the typical laboratory=> follow GSZ "The role of social capital in financial development"

## **Objective**

- Test the role of social capital using data from a survey of Italian households.
  - It contains information on portfolio decisions and use of financial contracts, as well as demographics for a sample of 32,700 households.

# Measures of use and availability of financial instruments

#### Households:

- Proportion of financial wealth retained in cash, deposits, stock (portfolio composition)
- Use of checks
- Probability of being denied credit
- Probability of receiving a loan from friends and family

## Measures of social capital

- Following Putnam GSZ use a measure of civic engagement to measure social capital:
  - participation in referenda
- Advantages:
  - available at the province level
  - not subject to biases in reporting (like surveys)
  - measured without error
- Robustness alternative measures
  - blood donation
  - WVS measure of trust at the regional level

# Social capital and Portfolio Choices

- When you invest your money you are often delegating somebody else
- Two implications:
- 1) More SC (and trust) implies more delegation and better portfolio allocations
- 2) The impact of SC (and trust) on the use of financial instruments that involve delegation should be higher among less educated people

## **Trust and Portfolio Choices-2**

- More social capital implies
  - less money retained in cash
  - more investment in stocks
- Effect stronger for the less educated

### **Control variables**

- All the regressions contain individual level and provincial-level control variables:
  - Household level controls: wealth, income, demographics etc.
  - measure of economic development (GDP per capita at the provincial level)
  - measure of efficiency of the judicial system, linear and squared (# of years it takes to have a judgment)

# Results on portfolio allocation

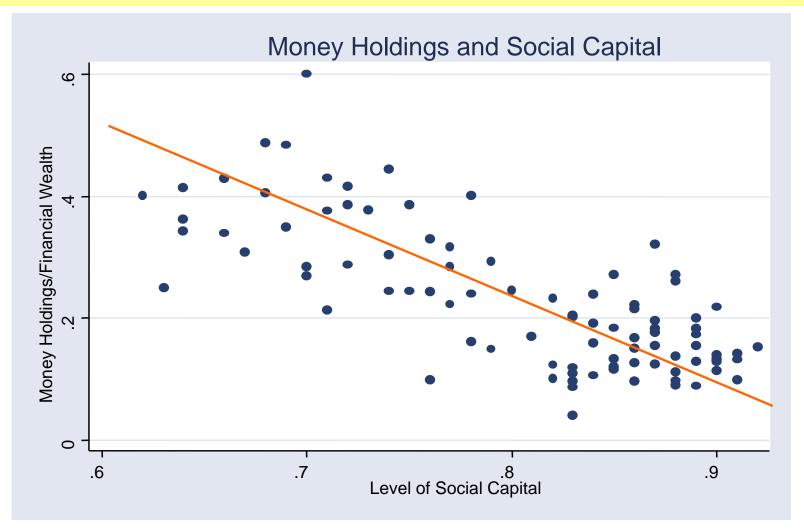
	CASH HOL	DING		
	I	II	III	IV
Social capital 1	-0.5007***	-0.5733***		
Social capital 1 - origin			-0.1961***	
Social capital 2				-0.6112*
North	-0.0506***			
South	0.0849**			
Judicial inefficiency	0.0860***	0.0787***		0.0833***
Judicial inefficiency2	-0.0102***	-0.0096***		-0.0095***
	STOCK НО	LDING		
Social capital 1	0.6515 0.9106*			
Social capital 1 - origin			0.0473***	
Social capital 2				2.5325***
North	0.2267***			
South	-0.1890*			
Judicial inefficiency	0.0447	0.0707		0.0611
Judicial inefficiency2	-0.0030	-0.0053		-0.0048

#### **Effects on Portfolio Allocation**

Increasing social capital from its value in lowest social capital-province to its value in the highest social capital-province:

- Lowers cash holdings by 28 percentage points
- Raises the portfolio share invested in deposits by 23 perc. points Raises the portfolio share invested in stocks by 54 perc. points
- One standard deviation increase in social capital:
  - reduces the amount of cash by 7% (1/3 in the amount of cash held)
  - increases by 6% the portfolio share invested in deposits
     (11% sample average probability)
  - increases by 14% the portfolio share invested in stocks (4.8 times the mean)

# Money and Social Capital



More money is held when individuals do not trust and thus is riskier to invest in alternative assets such as stocks. Source: Guiso et. Al (2004), "The Role of Social Capital in Financial development", American Economic Review

## Social capital and Use of Checks

- Using a check requires trust on two sides:
  - The person receiving the check has to trust that the issuer has enough funds to honor the payment.
  - The person issuing the check has to trust the receiver not to falsify the amount
  - if the check is mailed, the issuer has to trust that the check will not be stolen
- Likelihood of using a check should be positively affected by level of social capital

# Effect of Social capital on the use of checks

#### Use of checks

### Social capital

.732\*\*\*

- Increasing social capital from its value in lowest social capital-province to its value in the highest social capital-province:
  - Increase the probability of using checks by 22 percentage points
- One standard deviation increase in social capital:
  - increases the probability of using checks by 6% (12% of sample average probability)

## Social capital and Access to Credit

- Lending (especially consumer lending) is facilitated if the lender trusts the borrower.
- Thus, supply of loans to households should be higher in high social capital areas.
- How do GSZ identify supply?
- The SHIW has data on
  - consumer discouraged from borrowing
  - consumer turned down for a loan
- Likelihood of not having to access to credit smaller in high social capital areas

# Results on Social capital and Access to Credit

#### **Access to credit**

Social capital

-.059\*\*\*

- Increasing social capital from its value in lowest social capital-province to its value in the highest social capital-province:
  - Decrease the probability of being discouraged or turned down by 2 percentage points
- One standard deviation increase in social capital:
  - decreases the probability of being discouraged or turned down by .48% (16% of sample average probability)

#### **Informal Credit Market**

- 1) Informal lending is a substitute of formal lending -> more trust more formal lending
  - -> less informal lending
- 2) In low social capital areas, group with highest comparative advantage in trust intensive activities (lending) is a group with a comparatively high level of trust (such as friends and family).
- 3) Low levels of trust toward others are generally associated with high levels of trust within subgroups, such as the family.
- -> more social capital less informal lending

# Results on Social Capital and the Informal Credit market

#### F&F loans

#### Social capital

-.092

- Increasing trust from its value in lowest social capitalprovince to its value in the highest social capitalprovince:
  - lowers the probability of receiving loans from F&F by 3 percentage points
- One standard deviation increase in social capital:
  - decreases the probability of receiving loans from F&F by 1% (25% of sample average probability)

# Cross-sectional variation in the effect of social capital

- GSZ explore two dimensions:
  - Social capital and Law Enforcement
    - The worse the law enforcement is, the more people need to trust their counterparts.
  - Social capital and Education.
    - Educated investor needs to delegate (trust) less because they can substitute trust with direct monitoring. Thus, effect of social capital on portfolio allocation and use of checks should be smaller for more educated people

## Results of social capital and education

		ish in folio	% deport	osits in folio		ock in folio		use of ecks
	Low Ed.	High Ed.	Low Ed.	High Ed.	Low Ed.	High Ed.	Low Ed.	High Ed.
Social capital	-1.1	38	1.06	0.05	1.92	1.56	.85	.14

## Results of social capital and law enforcement

	% cash in portfolio		% deposits in portfolio		% stock in portfolio		
	High	Low	High	Low	High	Low	
Social capital	74	-1.04	.71	.73	.86	2.92	
	Prob. use of checks		Prob. ra	ationing	Prob. informal loan		
	Н	L	Н	L	Н	L	
Social capital	.38	1.0	001	095	039	134	

## Why does Social capital matter?

- If social capital generates cooperative behavior because it enhances non-legal punishment, each individual should act according to the level of social capital of the area in which he/she lives.
- If social capital is a moral attitude imprinted with education, an individual should retain the level of social capital typical of the place where he grew up.

### Why does social capital matter? -2

- The existence of several movers in the SHIW sample provides with the opportunity to try and distinguish between these two possible theories.
- Break the variable social capital into three:
  - social capital for non movers
  - "social capital of birth" for movers
  - "social capital of residence" for movers

# Results on why does social capital matter?

	Cash	Stocks	Checks	<b>Turned down</b>	Loan F&F
SC non movers	-0.961	1.908	0.743	-0.065	-0.105
SC of origin -movers	-0.222	0.558	0.259	-0.023	-0.059
SC of residence -movers	-0.756	1.327	0.529	-0.040	-0.041

## Summary

- GSZ identify a very strong correlation between the level of social capital prevailing in an area and the use and availability of financial contracts.
- This effect is not simply due to omitted environmental variables, because the behavior of movers is still affected by the level of social capital of their provinces of origin.
- Social capital is more important when legal enforcement is weaker and for less educated individuals.

## **SC** and Information

## Social capital and learning

- Social capital can lead to more information because it facilitates learning
- A dense set of ties facilitates information passing over from one investor to another
  - Since the same information can be used by more than one person when there is more social capital, the per capita cost of information gathering is lower
  - However, since one can learn from others without paying the cost of information collection, individuals have weaker incentives to collect information: they can wait ad free ride on the cost paid by others
  - In principle ambiguous effect on information amounts?

## Social capital and learning: 2

- Importance of peer-group effects in a variety of other contexts
- •Duflo and Saez (2000) and Madrian and Shea (2000) show that an individual's decision of whether or not to participate in particular employer-sponsored retirement plans is influenced by the choices of his co-workers
- •But how does the opportunity to learn from others affect incentives to collect information?

# Social learning and dissemination of information

- Individuals can learn about financial investment opportunities two ways
- 1. From their peers

2. From the signals that are disseminated, at a cost, from the producers or distributors of those instruments, e.g. stocks

## Take outs

- Legal factors are important determinants of financial development
- Still unclear what is the role of legal origin and thus the direction of causality
- Informal channels of enforcement are at least as important
- Besides through enforcement, informal channels matter for finance because increase quantity and quality of information

## Trust and participation in assets markets

The determinants of stock market participation are important for:

- 1) Asset pricing
  - # of people holdings determine price for risk
  - who holds also determine variability of consumption
- 2) Corporate finance:
  - Equity market development
    - Liquidity
    - Size
  - Ownership concentration
- 3) Public finance
  - Retirement systems
  - Income inequality
  - Risk sharing individual welfare

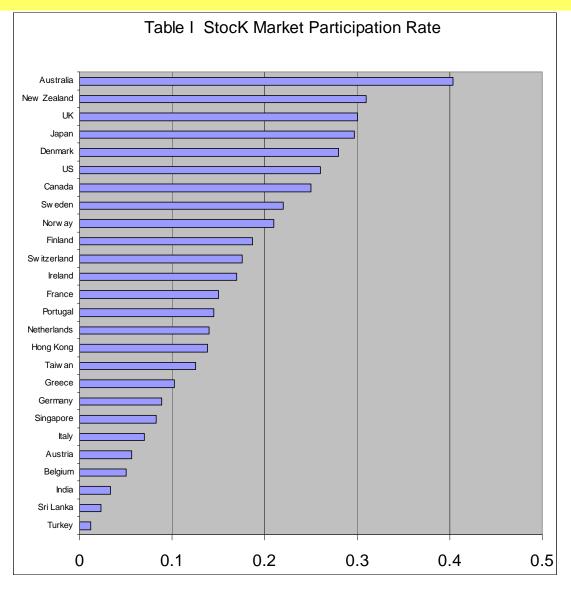
But existing models have limited explanatory power

# Review of conclusions on the stockholding puzzle

- Models based on fixed participation costs can explain limited participation but many features go unexplained
- 2. In general, existing theories cannot fully account for observed facts
- 3. What are these facts? Can existing theories explain them? Can accounting for trust explanation lack of participation? How can it be tested?
- 4. Let us begin with three facts.

# Fact 1: Stock Market Participation Varies a Lot Across Countries

Source: Giannetti and Koskinen (2005)



#### Fact 2: Even at high wealth not all participate

**Direct Stockholding** 

	Quartile I	Quartile II	Quartile III	Quartile IV	Top 5 %	Average
U.S.	1.4	6.9	20.6	<mark>47.9</mark>	70.1	19.2
U.K.	0.0	4.4	28.3	<mark>53.6</mark>	67.9	21.6
Netherlands	1.5	7.4	20.0	<mark>40.3</mark>	60.2	17.2
Germany	0.6	4.1	16.1	<mark>36.1</mark>	50.5	14.0
Italy	0.0	0.8	3.1	12.8	30.8	4.0
Austria	0	1.7	2.8	<mark>15.6</mark>	25.7	5.0
Sweden	12.9	30.7	46.9	72.8	80.6	40.8
Spain	0	0.3	1.8	13.2	14.4	3.5
France	0.7	9.9	14.6	<mark>33.3</mark>	44.2	14.4
Denmark	6.3	25.9	36.4	<mark>55.6</mark>	68.4	31.0
Greece	0	0.7	3.2	<mark>17.3</mark>	23.5	4.9
Switzerland	2.8	12.2	30.3	<mark>54.2</mark>	63.2	24.9

# Fact 3 Households diversify too little (few stocks in portfolio)

**Table 9: Evidence on the Diversification of Stock Holdings** 

	1989	1992	1995	1998	2001
undiversified households (more than 50% of equity					
in brokerage acct with fewer than 10 stocks)					
% total equity reported	21.0	18.3	13.6	11.3	12.0
% of households with equity	32.5	23.7	17.8	14.8	13.7
mean % own company stock/total	35.0	31.5	30.5	25.2	29.2
mean age	50.9	51.0	53.9	51.7	50.3
mean equity/net worth	16.7	18.3	23.6	29.1	28.4
mean business/net worth	7.6	8.3	5.5	5.3	5.2
mean real estate/net worth	51.8	48.0	47.9	49.7	50.0
real net worth	461,327	413,194	392,998	429,649	517,481
diversified households					
mean % own company stock/total	1.4	1.9	1.2	1.7	1.5
mean age	47.0	47.6	46.0	47.2	47.1
mean equity/net worth	20.0	26.5	31.4	35.7	36.2
mean business/net worth	5.6	6.1	4.3	5.7	5.8
mean real estate/net worth	53.8	49.5	50.1	42.9	45.2
real net worth	466,896	360,744	341,218	433,978	549,104

**Source:** Curcuru, Heaton, Lucas, and Moore (2004) "Heterogeneity and Portfolio Choice: Theory and Evidence," prepared for the Handbook of Financial Econometrics.

#### 2) Can Existing Models Explain These Facts?

- Frictionless EU portfolio model
  - holdings only determined by risk aversion
- + fixed participation cost
  - explains lack of full participation
  - inferred fixed costs seem plausible
- Behavioral (some type of deviation from rationality) :
  - No formal predictions.
  - More optimistic will participate more

### Relying on limited trust

- Rely on GSZ and try to explain these facts using the idea that people are afraid to enter unknown gambles.
- Explicitly model the role of trust in the decision to participate in the stock market.
- Test it in 3 different scenarios:
  - Dutch sample
  - Italian sample
  - International sample

# How much confidence do you have in major companies? (WVS)

Country	No confidence	•	Total fraction with limited confidence (1)+(2)			
	(1)					
USA (51% do not in	vest in stocks;	<mark>4%</mark> of the wealthy do not inv	vest)			
Total sample	7.22	<mark>41.54</mark>	48.76			
Top 30%	6.46	41.78	48.24			
Top 10%	5.03	43.55	48.58			
Italy (92% do not in	vest in stocks;	35% of the wealthy do not in	nvest in stocks)			
Total sample	18.54	31.38	49.92			
Top 30%	28.32	35.49	53.81			
Top 10%	28.89	38.67	67.56			
Netherland						
Total sample	12.03	47.29	59.32			
Top 30%	8.66	48.38	57.04			
Top 10%	3.45	40.23	43.68			
<b>Sweden</b> (34% do not invest in stocks; 4% of the wealthy do not invest in stocks)						
Total sample	5.99	40.31	46.30			
Top 30%	3.34	33.89	37.23			
Top 10%	2.0	20.0	22.0			

### **Implications**

- 1) Only investors with high trust will hold stock.
- 2) With costs of participation and partial trust the wealth threshold to induce participation is higher than with full trust
- 3) Participation is higher in more trusting countries; *i.e.* in those countries where the subjective belief of being cheated is lower.

# Testing the implications using the Dutch household survey

- Center at University of Tilburg administers the survey
- Run on a sample of 2,000 households (4,000 individuals)
- General info on demographics
- Detailed info on assets holdings
- Sample interviewed through the internet
  - If household has no computer or access to the net, Center provides a set-top box and if necessary a television set that can be used to fill in questionnaires.
- Sample from a rich country: if an effect of trust is found this is not because the country has poor institutions!

#### **New Variables**

- GSZ designed an ad hoc questionnaire and submitted to this Dutch sample.
- Ask questions in order to obtain measures of:
  - Trust
  - Risk aversion
  - Ambiguity aversion
  - Optimism
- The last the variables are meant to control for variables that may be correlated with trust, to avoid trust picking up other effects

### Measuring New Variables 1

- Trust (use WVS wording to obtain generalized trust ):
  - "Generally speaking, would you say that most people can be trusted or that you have to be very careful in dealing with people?"
    - Most people can be trusted.
    - One has to be very careful with other people.
    - I don't know.
- Risk aversion (standard willingness to pay for a lottery)
  - "Consider the following hypothetical lottery. Imagine a large urn containing 100 balls. In this urn, there are exactly 50 red balls and the remaining 50 balls are black. One ball is randomly drawn from the urn. If the ball is red, you win €5,000; otherwise, you win nothing. What is the maximum price you are willing to pay for a ticket that allows you to participate in this lottery? "
    - Euros

### Measuring New Variables 2

• Ambiguity aversion (measures aversion to uncertainty about probabilities) "Consider now a case where there are two urns, A and B. As before, each one has 100 balls, but urn A contains 20 red balls and 80 blacks, while urn B contains 80 reds and 20 blacks. One ball is drawn either from urn A or from urn B (the two events are equally likely). As before, if the ball is red you win €5,000; otherwise, you win nothing. What is the maximum price you are willing to pay for a ticket that allows you to participate in this lottery?"

#### Euros

#### Optimism

Consider the following statement: "I expect more good things to happen to me than bad things." Do you:

- 1. Strongly disagree;
- 2. Disagree;
- 3. Neutral;
- 4. Agree;
- 5. Strongly agree

## **Summary Statistics**

	Mean	Median	SD
Trust WVS	0.332	0.000	0.471
Maximum price to participate in the risky lottery (EUR)	123.000	1.000	421.000
Absolute risk aversion ( $\theta$ )	0.107	0.028	0.186
Maximum price to participate in the ambiguous lottery	90.000	1.000	341.000
Ambiguity aversion ( $\omega$ )	4.155	7.108	4.275
Fraction ambiguity averse	0.346	0.000	0.476
Individual optimism	3.127	4.000	1.532
Share of direct stockholders	0.135	0.000	0.342
Share of risky assets holders	0.422	0.000	0.449
Number of stocks among stockholders	3.900	3.000	6.920

### Trust and wealth

Financial Wealth								
Quartile Quartile Quartile Top 5 % Average								
	I	II	III	IV				
Trust W 0.342 0.373 0.409 0.396 0.365 0.382								

Trust is uncorrelated with wealth

### Direct Stock Market participation:

		Whole		Above median wealth	
	(1)	(2)	(3)	(4)	(5)
Trust	0.065***	0.059***	0.057***	0.064	0.072**
	(0.023)	(0.022)	(0.022)	(0.051)	(0.036)
Risk aversion	0.055	0.061	0.061	0.012	0.113
	(0.052)	(0.047)	(0.047)	(0.122)	(0.085)
Ambiguity aversion		-0.002	-0.002	-0.001	-0.003
		(0.002)	(0.002)	(0.004)	(0.003)
Optimism			0.005	0.047*	0.023
			(0.010)	(0.025)	(0.019)
Stock market				-0.02	
expected to go up				(0.043)	
Financial wealth	0.001***	0.001***	0.001***	0.001**	0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Income	0.994	0.837	0.824	-7.001	3.831
	(1.325)	(1.190)	(1.189)	(20.720)	(3.662)
Male	0.039	0.036	0.036	0.025	0.047
Age	-0.005**	-0.004*	-0.005*	-0.010*	-0.006
Age square	0.000**	0.000**	0.000**	0.000*	0.000
Household size	-0.015	-0.014	-0.014	0.041	-0.075*
Number of children	0.040	0.037	0.037	0.009	0.121**
College education	0.072**	0.066**	0.063*	0.357***	0.072
High school education	0.041	0.038	0.036	0.169*	0.055
Employee	-0.002	-0.000	-0.002	-0.139**	-0.058
Observations	1,156	1,156	1,156	255	618

## Risky assets participation

		Whole sample					
	(1)	(2)	(3)	(4)	(5)		
Trust	0.085**	0.084**	0.082**	0.053	0.084*		
Risk aversion	-0.100	-0.107	-0.106	-0.039	0.019		
Ambiguity aversion		0.000	0.000	0.001	0.000		
Optimism			0.007	-0.009	0.042*		
Stock market expected to go up				-0.028			
Financial wealth	0.003***	0.003***	0.003***	0.001***	0.001***		
Income	-1.951	-1.979	-2.006	-53.158	-4.451		
Male	0.109**	0.109**	0.109**	0.153	0.096		
Age	-0.007	-0.006	-0.007	-0.009	-0.011*		
Age square	0.000*	0.000*	0.000*	0.000	0.000		
Household size	0.165***	0.165***	0.164***	0.083	0.119**		
Number of children	-0.109**	-0.109**	-0.108**	0.023	-0.051		
College education	0.016	0.016	0.013	0.136	-0.029		
High school education	0.020	0.019	0.017	0.083	0.011		
Employee	0.183***	0.183***	0.181***	0.203*	0.109*		
Observations	1,007	1,007	1,007	237	618		

# Share of financial wealth in stocks & risky assets: tobit

		Share in	n stocks	
Trust	0.131***	0.133***	0.130***	0.145
Risk aversion	0.064	0.085	0.085	-0.048
Ambiguity aversion		-0.003	-0.003	0.003
Optimism			0.012	0.088
Stock market expected to go up				-0.039
Financial wealth	0.002***	0.002***	0.002***	0.001
	S	hare in risky i	financial asse	ets
Trust	0.096***	0.096***	0.095***	0.022
Risk aversion	-0.093	-0.095	-0.095	-0.068
Ambiguity aversion		0.000	0.000	0.004
Optimism			0.004	-0.003
Stock market expected to go up				-0.030
Financial wealth	0.002***	0.002***	0.002***	0.001*

### Summary thus far

- Risk and ambiguity aversion show little predictive power
- Trust has explanatory power both for direct and overall stockholding:
  - 6.5 pp of direct stockholding (48% of sample mean)
  - 8.5 pp of total risky assets holding (20% of sample mean)
- Trust also affects the share invested conditional on participating ⇒ raises share in stocks by 3.4 pp (15.5% of mean share) and in risky assets by 3.8 pp (15% of mean share)
- Optimism helps somewhat predict overall stockholding (at least for the wealthiest) but has no effect on the share

#### Concerns

- Is trust a proxy for <u>risk aversion</u>?
  - Check how demand for insurance is related to trust?
- Is trust a proxy for <u>ambiguity aversion</u>?
  - Look at the interaction between trust and education

#### Trust and the demand for health insurance

	Probabil	Tobit		
Trust	0.050	0.048	0.043	179.759
	(0.031)	(0.031)	(0.031)	(223.050)
Risk aversion	-0.126	-0.137*	-0.135*	-773.808
	(0.079)	(0.080)	(0.080)	(591.815)
Ambiguity aversion		0.000	0.000	0.188
		(0.000)	(0.000)	(0.284)
Optimism			0.019	178.813
			(0.016)	(115.943)
Financial wealth	0.001***	0.001***	0.001***	5.767***

# Is Trust Reflecting Mis-measured Ambiguity Aversion?

- If trust is driving results, than its impact should differ across education levels
  - More educated less dependent on cultural stereotypes and thus on trust if culture ⇒ trust
  - More educated need rely less on trust when making portfolio decisions: can understand better, do not need to delegate
- Ambiguity aversion has no prediction of the sort

### Trust and Education

	Ownershi	ip of stock		ip of risky sets	Share of stocks		Share of risky assets	
	Low educ	High educ	Low educ	High educ	Low educ	High educ	Low educ	High educ
Trust	0.059**	0.014	0.095**	0.056	0.155***	0.071	0.119***	0.052
Risk aversion	0.018	0.229*	-0.094	-0.201	-0.004	0.288	-0.102	-0.174
Ambiguity aversion	0.003***	-0.001	0.000	0.001	-0.007	-0.002	0.000	0.001
Optimism	-0.000	0.032	-0.001	0.021	-0.003	0.066	-0.006	0.021
Financial wealth	0.001***	0.002***	0.002***	0.003***	0.002***	0.002***	0.002***	0.002***
Obs.	858	298	748	259	740	259	740	259

# Is it Generalized or Personalized Trust that Matters?

- Data from a survey on a sample of customers of a leading Italian bank
- Info on portfolio composition
- Asked to report how much they trust the bank
  - "How much do you trust your bank or broker as financial advisor for your investment decisions?"
    - A lot; enough; so and so; not much; at all
- Information on risk attitudes
  - "In your view risk is
    - a) an uncertain event from which you can profit
    - b) an uncertain event one should protect from "
- Look at risky assets ownership and allocation

### Results

	dProbit for Ownership of risky Assets	Share invested in risky asset (Tobit)
High personalized trust	0.1610***	0.0653***
Medium personalized trust	0.0580	0.0226
Averse to risk	-0.04*	-0.0883***
Financial wealth	0.0010***	0.0001*** (0.000)
Male	0.1050***	0.0753***
Age	0.0219***	0.0144***
Age2	-0.0002***	-0.0001***
Education	0.0221***	0.0138***
Observations	1,834	1,834

# Trust & ownership structure within country

	Firm has a sin	gle shareholder owning	g all the shares
Trust	-0.394***	-0.468***	-0.394***
	(0.152)	(0.167)	(0.157)
North	-0.023	-0.015	
	(0.017)	(0.017)	
South	0.021	-0.029	
	(0.030)	(0.028)	
Judicial inefficiency	-0.039	-0.028	-0.026
	(0.029)	(0.030)	(0.029)
Judicial inefficiency	0.003	0.004	0.004
squared	(0.004)	(0.004)	(0.004)
Per capita GDP	0.324	0.319	0.286
	(0.402)	(0.483)	(0.420)
Pseudo-R <sup>2</sup>	0.105	0.104	0.105
Observations	3,268	3,268	3,268

## Trust & stock market participation: international evidence

	% population participating in the stock market		
	(4)	(5)	(6)
Trust (WVS)	0.272** (0.041)	0.399*** (0.001)	0.390 *** (0.000)
Legal		0.246***	0.143*
Enforcement		(0.003)	(0.08)
Common Law			0.091** (0.02)
Observations	24	23	23
R <sup>2</sup>	0.18	0.50	0.62

#### Conclusions

- A trust-based model of stock market participation has some plausible predictive power
- 2. It is able to explain
  - Low levels of participation among the wealthy
  - Systematic differences across countries and within countries
- 3. Its key parameter is easily observable