

Interfirm Relationships and Business Performance

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- Research questions:
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 - 2 What are the mechanisms?
- We also expect policy lessons on business associations.

- Recent interest in role of firm networks:
 - Models predict that supply chains affect aggregate inefficiencies and can amplify shocks (Acemoglu et al 2012, Eaton et al 2013).
 - Observational data show that lower search costs improve networks and firm performance (Bernard, Moxnes and Saito 2015).
 - Experimental evidence shows that interactions create managerial connections that affect diffusion (Fafchamps and Quinn 2014).

Contribution to the literature

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 - Observational data show that lower search costs improve networks and firm performance (Bernard, Moxnes and Saito 2015).
 - Experimental evidence shows that interactions create managerial connections that affect diffusion (Fafchamps and Quinn 2014).
- Goals of this project:
 - Exploit meetings explicitly designed to foster business interactions to measure effect of networks.
 - Use additional interventions to explore mechanisms:
 - Peer effects: variations in peers' performance and characteristics
 - Information sharing: diffusion of new financial products
 - Overcoming barriers of finding partners: variation in meeting frequency
 - Evaluate scalable policy intervention of business meetings.

Outline from here

- ① Experimental design.
- ② Results.
- ③ Conclusion.

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- **Sample:** Young firms interested in business meetings.

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 - They were informed that there was no room in the meetings.
- Both treatment and control firms got a government certificate if they attended the meetings and completed our surveys.



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- Today: only use data from baseline and midline surveys.

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- ② Information transmission.
 - Distributed information to random managers about (i) a funding opportunity for the firm, (ii) a savings opportunity for the manager.
- ③ Role of repeated interactions.
 - We organized one-time cross-group meetings (10 managers each) for randomly selected managers in the treatment group.

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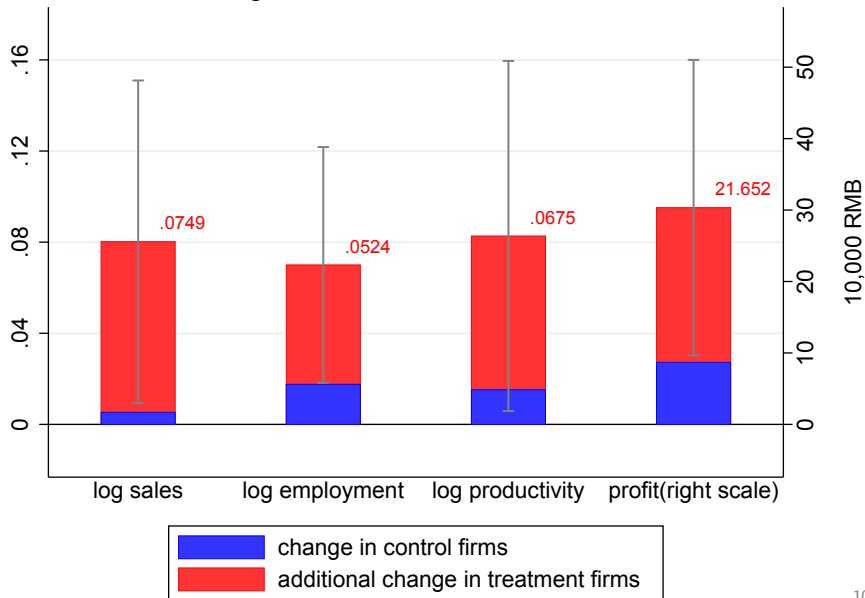
- ① Experimental design.
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Summary statistics

	All Sample	Treatment	Control	Difference
<i>Number of Observations</i>	2646	1409	1237	
Firm Age	2.34 (1.75)	2.39 (1.72)	2.29 (1.77)	0.1 (0.068)
Ownership - Private non-SOE	0.98 (0.15)	0.98 (0.15)	0.98 (0.15)	0 (0.006)
Industry - Manufacturing	0.5 (0.01)	0.51 (0.013)	0.48 (0.014)	0.03 (0.019)
Number of Employees	36.19 (86.49)	36.33 (90.63)	36.01 (81.55)	0.32 (3.37)
Number of Clients	45.89 (57.37)	45.58 (56.16)	46.23 (58.74)	-0.65 (2.24)
Number of Suppliers	16.38 (19.23)	16.7 (20.3)	16.02 (17.94)	0.68 (0.75)
Bank Loan (1=Yes, 0=No)	0.25 (0.43)	0.25 (0.44)	0.25 (0.43)	0 (0.017)
Sales (10,000 RMB)	1593.62 (6475.18)	1510.7 (5291.86)	1686.19 (7603.11)	-175.57 (252.32)
Net Profit (10,000 RMB)	79.23 (205.35)	77.26 (199.92)	81.52 (211.55)	4.25 (8.09)
Percentage of Firms Shut Down	4.12 (1.99)	3.76 (1.9)	4.53 (2.08)	-0.77 (0.7)

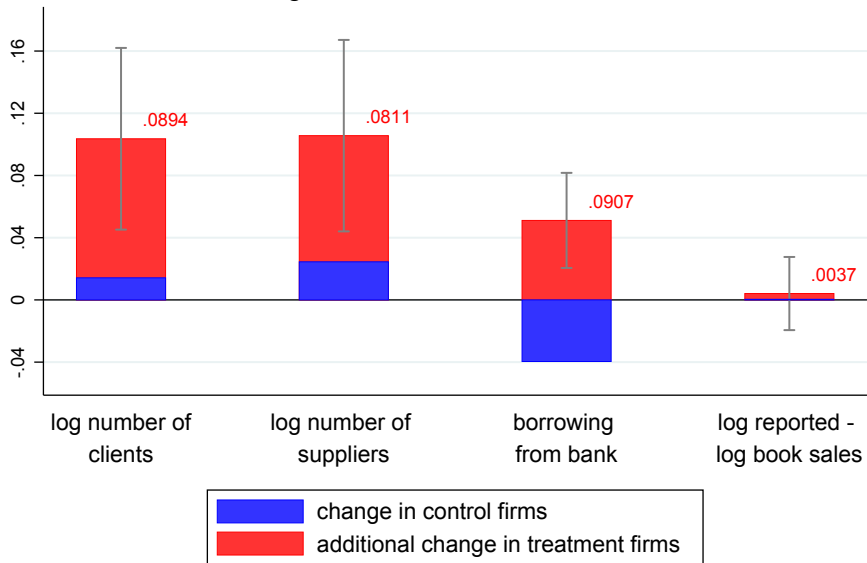
Effect of meetings: Firm performance

Change between baseline and midline



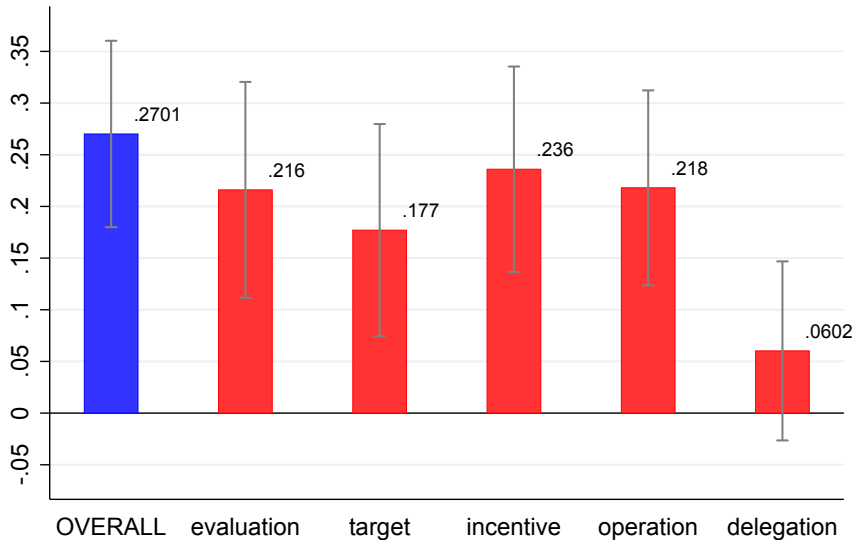
Effect of meetings: Intermediate outcomes

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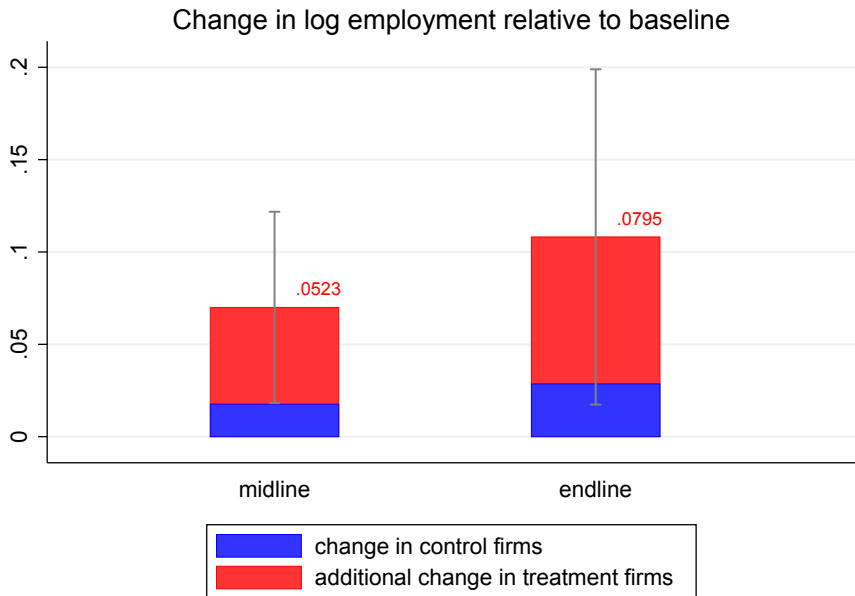


Effect of meetings: Management

Treatment effect on management at midline



Effect of meetings: long-term effects on employment



- ① Peer effects.
- ② Information transmission.
- ③ Repeated interaction.

Mechanisms: (1) Peer effects

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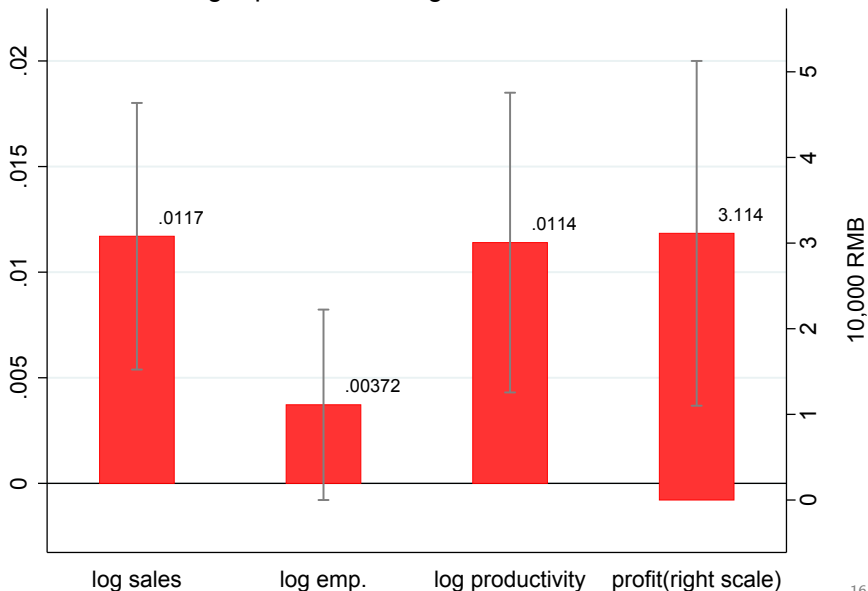
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 - Through peer training, imitation, or access to better resources.
- We randomized firms into groups based on firm size and sector at the region level.
 - In each region, we split firms by median employment into “small” and “large”.
 - We split firms by sector into “manufacturing” and “services”.
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- We measure peer effects with impact of peer firms' average number of employees.

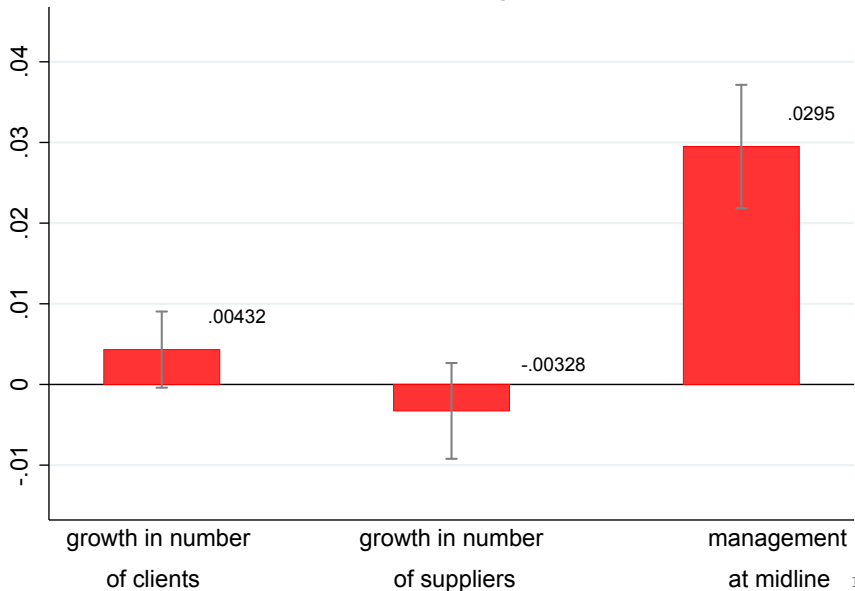
Peer effects: Results

Effect of 10% larger peers on change between baseline and midline



Peer effects: Intermediate outcomes

Effect of 10% larger peers



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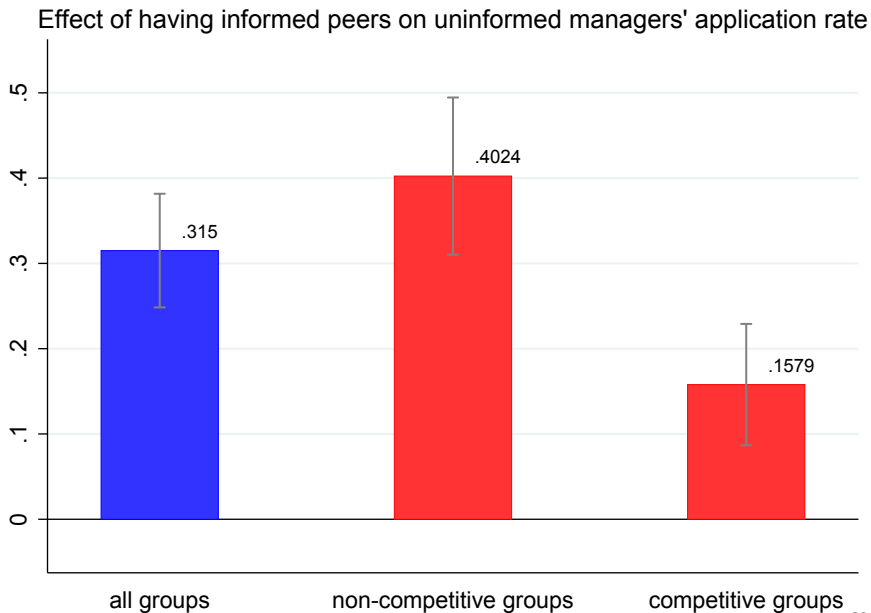
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- Created variation across groups in share of informed managers.
 - Treatment: distributed information to 0%, 50%, or 80% managers within a business group.
 - Control: distributed information to 40% managers.

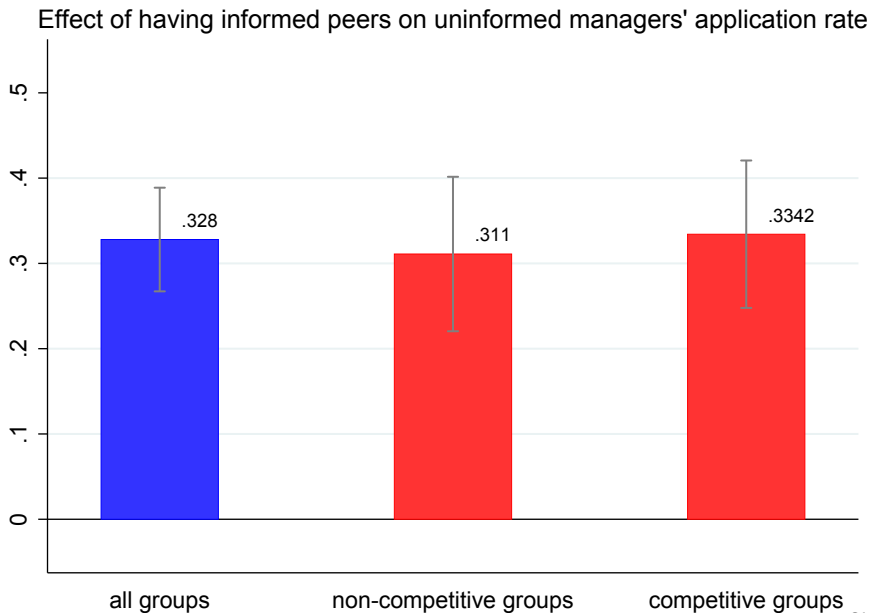
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 - Treatment: distributed information to 0%, 50%, or 80% managers within a business group.
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- We asked managers who are their competitors in the group.
 - Created an indicator for groups being “competitive” by the median of the group-level average number of competitors.

Information transmission: Funding for firm



Information transmission: Savings for manager



- ① Peer effects.
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- This intervention helps distinguish between two barriers for finding business partners:
 - Lack of information.
 - Lack of trust.
- If lack of information is the main barrier, we expect the same share of new partners in both in-group and cross-group meetings.

Repeated interactions: Results

<i>Panel A</i>	Number of Referrers		Difference
	In Regular Group	In Cross Group	
Mean	2.18	0.06	2.13***
Standard Deviation	(0.083)	(0.62)	(0.079)
<i>Panel B</i>	Number of Direct Partners		Difference
	In Regular Group	In Cross Group	
Mean	1.44	0.29	1.15***
Standard Deviation	(1.49)	(1.52)	(0.07)
<i>Panel C</i>	Choice in Trust game		Dif
	In Regular Group	In Cross Group	
Mean	3.52	0.94	2.58***
Standard Deviation	(0.13)	(0.12)	(0.12)

- More connections and higher trust within a group.
- Consistent with repeated interactions and social capital being key for creating beneficial business relationships.
- Results show that regular meetings reduced the cost of new partnerships.

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- External validity and policy implications:
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 - Results on diffusion and peer effects suggest that managers viewed their peers as trusted experts and followed their advice.
 - Meetings may help when trust and information frictions are big
 - Business associations may be an effective tool for young firms in poor countries which are interested in investing in improvements.

- We used a field experiment to show that expanding managers' networks significantly improves firm performance.
- We found evidence on three mechanisms:
 - ① Firms with larger peers perform better.
 - ② Group members share information with each other.
 - Especially if they are not competitors.
 - ③ Repeated interactions build relationships and improve trust.
- Many next steps:
 - Long-term impacts.
 - Other outcomes: hours worked, wage, innovation, worker satisfaction.
 - Heterogeneous effects: identify which firms benefit from the meetings.
 - Aggregate impacts: combine estimates with a structural model.