"Information, Credit and Organization"

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Research Question

- How does the credit information environment affect the organizational design of lending?
  - Information: objective (verifiable) and subjective/soft information as distinct inputs in bank's production function
- Theory: principal (manager) and agents (loan officers)
  - Incentives or cost of processing info
  - Ambiguous predictions

Discussion summary

- Interesting and relevant question: hard to find an appropriate empirical setting to test these theories
- Results are suggestive and intuitive

Discussion summary

- Interesting and relevant question: hard to find an appropriate empirical setting to test these theories
- Results are suggestive and intuitive
- Two main (connected) issues:
  - Implementation: I think more could be done to convince reader claim of causality is valid
  - Interpretation: Try to rule out plausible alternative interpretations
- In particular, cross sectional variation is not randomly assigned; could be correlated with credit market outcomes and organizational design, inference is not clear

What does the paper do?

- Focus on one large bank in Argentina
- Exploits an institutional change in the availability of verifiable credit information of a relatively large subset (40%) of bank's borrowers (same change used in Hertzberg et. al - 2011)
  - Change made public the information (balance, collateral, repayment status) all banks had about borrowers whose balance was less than USD 200k or who had a bad credit rating

Empirical strategy

- Paper exploits time series variation within observational unit (borrower, loan officer, division) in the informational environment induced by the institutional change
- At the borrower level, exploits cross sectional variation in exposure to institutional change

$$y_{it} = \alpha_i + \beta After_{it} + \gamma After_{it} \times Exposed_{it} + X_{it}\delta + \epsilon_{it}$$

- Interested in γ: effect of public information on lending (+)/ rates (-).
- Interact *After* $\times$ *Exposed* with a *Revealed Bad*: lending (rates) increases (decrease) for borrowers who are revealed to be good (bad); this is efficient, on average

Questions

- These results are intuitive and I want to believe that at least part of the magnitude is causally connected to the change in info environment
- Big question: can full magnitude be causally assigned to the institutional change?
- ID assumption is that **trends** in lending would have been the same for borrowers exposed and not exposed. Is this true/expected?
  - Fixed effects do not help with this
- What do we know about exposed v/s not-exposed borrowers?
  - Not too much: smaller loans, higher interest rates

Effect on organization

- Second set of results: loan officer and division level
  - TS variation of info environment plus CS variation of the exposure of loan officers/divisions to policy change
  - Bank is re-organized: less loan officers per division, more borrowers per loan officer, who increase industry coverage and face fewer layers of aproval
  - Interesting!
- But, same problem as above: CS variation is not randomly assigned
  - Are divisions with a larger exposure to change different in some systematic way? Should we expect trends in org. design to be the same?
- **Suggestion: provide evidence to support the identification assumption (e.g., pre-period trends)**

Alternative interpretation

- Most results hold if we substitute "variation in information environment" with "variation in size" or "variation in age"
  - Non-results for control firms could be due to power (i.e., less variation in the time series **within** control group relative to treated group)
- E.g., suppose **small** firms are more informationally opaque (verifiable info is costlier to obtain); subjective information is less reliable (leads to worse decisions)
  - In the time series, smaller (exposed) firms that remain as clients **become larger**

Additional evidence

- Most results survive when focusing on borrowers relatively "close" to USD 200k
- This is nice and promising, but...
- ... would like to know more about what borrowers look like ex ante on either side of the cutoff
  - In particular, if we believe the results in the paper, then it is not correct to assume groups on either side of the cutoff are comparable (more specifically, would have had comparable trends)
- **Suggestion: make this section more important and verify identification assumption, or use data to address specific interpretations**
  - Compare trends of comparable groups 1 year later, do we observe same patterns?

Modest proposal

- Setting is ideal to test for benefits and costs of a credit registry in a competitive environment
  - Increases bank's screening capabilities but makes good clients visible (e.g., Pagano and Jappelli - 1998, Einav et al - 2010)

Summary

- Interesting idea, nice setting to test hard-to-test theories
- Need more convincing on the empirical side
- Data may be used to rule out other plausible alternatives
  - In particular, characteristics that we expect to be highly correlated with creditworthiness, profitability, and organizational design (like size or age)

Thanks

Thanks!