DISCUSSION

The causal effect of credit guarantees for SMEs: evidence from Italy

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Summary

Empirical study on the effects of a public credit guarantee scheme

- large Italian region, starting 2008, 20 mn. Euro per year
- eligible firms: SMEs, not in economic or financial distress, sensitive sectors
- 200 (152) treated firms, 6000 controls

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Findings

- shift in debt structure towards long-term
- no effects on total debt or real outcomes
- slight increase in default probability

Empirical challenges to identification of causal effects

Endogenous selection

- policy makers select banks
- firms select banks
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Addressed with IV estimation

- instrument: lending relationship with bank B in $t - 3$ that became covenant after that policy had been planned

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and supported with

- demanding falsification tests
- DiD-matching estimation

IV Estimation: Wooldridge's Procedure 18.1

IV with generated instrument

- second stage: $y_{itmr} = \alpha + \beta T_{it} + \mathbf{X_{it}}\gamma + FE + \epsilon_{it}$
- first stage: instead of $BankB_{t-3}$ as instrument for T_{it}, use

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\begin{aligned}
Pr(T_{iT} = 1|\mathbf{X}, BankB_{t-3}) \\
=&\Phi(\alpha + \phi_1 BankB_{i,t-3} + \phi_2 Eligible_{i,t-3} + \phi_3 \mathbf{X}_{i0})
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- this can be more efficient if instrument is binary
- but it is not perfectly clear where the identifying variation comes from
  - technically, even if there was no instrument excluded from $\mathbf{X}$, identification can be reached of the non-linearity of $\Pr(\cdot)$ (!?)

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→ $Eligible_{t-3}$ should also be a matching variable in the DiD-matching analysis

Empirical strategy

Selection issues adressed ?

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Outcome and treatment variable:

- could you look at turnover, employment, profits ?
- amount of the guaranteed loans instead of binary indicator ?

Estimation equation

$$y_{itmr} = \alpha + \beta T_{it} + \mathbf{X_{it}}\gamma + \delta_i + \mu_{mt} + \rho_{rt} + \epsilon_{it}$$

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- in principle, T_{imt} would allow use of firm×year effects
  - ⇒ firm selection by banks or by themselves addressed
- bank×firm effects could also be used
  - ⇒ bank selection by policymakers addressed (to some extent)

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Lower interest rates

- Bank's incentives ?
- Did other banks have the opportunity to become covenants ?
- Do firms pay an insurance premium ? Is it fair ?

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Adjustment towards LT finance

- Could banks/firms decide upon the amortization period?
- Does this reflect an economic decision or is it because "loans backed by the government by the government typically have a 5-year amortization schedule" ?

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DiD-Matching

- I think what you estimate is an ATT, not ATE $\Rightarrow$ not directly comparable to IV/OLS estimates

Very minor comments, but maybe helpful

- p7, line 17: contracts backed by guarantees or <u>not</u> backed by guarantees ?
- eqn (1): ϵ should have *mr*-index
- p12, line 17: redundant <u>from</u>
- p13, line 16: redundant <u>that</u>
- p14, 3rd paragraph: were exactly is it shown that "lagged creditor bank is good predictor?"
- eqn (2): should the $t-3$-Index not be $T-3$?
- p16, 1st paragraph: what is the data source of the variable *eligible*?
- p19, line 10: redundant <u>the</u>
- eqn (3): *dsubsidy* should have an *i*-index?
- tab 12, column (2): either the sign of the treated*post coefficient or the heading does not match with the text on p20

Thank you for your attention!