Department of Real Estate
School of Design and Environment

Discussion

Collateral versus Bank Lending Channel: Evidence from a massive earthquake

Seow Eng ONG PhD CFA
Department of Real Estate
National University of Singapore

Dec15, 2017

Hitotsubashi-RIETI International Workshop
Real Estate Market and Macro Economy

Important and meaningful research

- Firm's access to credit is an important research question for economists
- Access constrained by

  (a) value of collateral held by firm *(collateral channel)*

  (b) bank's capacity to lend *(bank lending channel)*

  While much research has been done on CC and BLC, this paper examines both using the Tohuku earthquake (2011) as a natural experiment

Research questions and Contribution

- Impact of CC and BLC
- Compare size and persistence of impact for CC and BLC
- Impact on firm activity, loan and investment
- Policy measures to alleviate impact

- Both CC and BLC exist
- Economic impact similar in size; BLC impact is more persistent
- Lower activity and loans
- Government subsidies help

Research strategy

- Tokyo Shoko Research (TSR) survey in Iwate, Miyagi and Fukushima (30000/56101 firms, 7021 response) in 2012 ➔ 1190 observations
  - CC: damage to non-land tangible assets and land assets (normalized)
  - BLC: special loss in FY2010 of primary bank, capital ratio (Basel and total), relocation, closure
- Impact over time using 2013, 2014 and 2015 surveys (smaller samples)

Estimation

- Probit and Ordered probit models: focus on CC and BLC variables, with control variables
- Firm activity: two stage approach rather than OLS
  - Commendable, control for predicted procurement since activity is influenced by loan procurement

New loan procurement

- Observed outcome is whether a firm procures (new) loan in 2012 (50%)

Comments

- How is this outcome defined? Differentiation between necessary and sufficient funds?
- Baseline: What is the procurement ratio before 2011?
- Did procurement ratio change after 2012?

What decisions affect observed outcome?

- Firm's decision to apply for new loan
  - Firm specific control variables (employment, business conditions, leverage, industry)
  - Activity (more details will be helpful)
  - Investment (in previous year)
  - Loan ratio (check for collinearity with Leverage)
  - Demand for new loans from less affected prefectures?
- Decision by bank
  - Not necessarily the primary bank
  - Single or multiple bank?
  - Change in bank?

Some considerations

- New loan versus rollover of loan?
- New loan collateralized on specific asset? Given that leverage is already high (average 86%)
- Effect of damage to tangibles and land on business operations?
- Should bank decision be modelled separately and independently? Influenced by change in collateral value?

Effect of CC and BLC over time

Year	Responses	nob
2012	7021	1190
2013	7481	953
2014	5713	506
2015	4116	427

- How many observations if a panel is constructed?
- Perhaps focus on 2012 and 2013 (highest nob)
- Survival-ship bias or less relevance?

Summary

- Very interesting and relevant research
- Nice unique dataset
- Attempt to cover both CC and BLC is novel