Information Externalities and Small Business Lending by Banks: A Comparison of Metro and Rural Counties in the U.S

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Importance of Small Businesses

- Strengthening entrepreneurship is important for growth
- Small businesses account for around 50% of GDP in the U.S.
- Financing is crucial to the survival of small business
- Thin information on local viability creates financing problems for Small & Medium-sized Enterprises (SMEs)

Research Questions

- Why do SMEs in some counties receive more loans than SMEs in other counties?

- Do varying local levels of information (i.e. thick vs thin markets) create information externalities, which in turn affect lending to local SMEs?
  - *Geographic Informational Asymmetries*

Focal Variable and County Typology

- Focal variable: Lending per SME
  - Small banks <$1 billion in assets
  - Local HQ/branches, relationship lending
  - Most likely to be sensitive to information
- Metro, Micro, and Rural counties
  - Metro: 1100 counties (84% of pop'n)
  - Micro: 688 counties (10% of pop'n)
  - Rural: 1354 counties (6% of pop'n)

Key Explanatory Variables

- Competition in the local banking market
  - Number, assets, & deposits relative to SMEs
- How well are local banks performing?
  - Performance and Charge-offs
- Market's informational thickness
  - Density of SMEs per capita
  - Births and deaths of SMEs per capita
  - Bank assets per SME

Data

- National Survey of Small Biz Finance: NSSBF
  - Federal Reserve and U.S. Small Biz Admin
- Commercial banks: 1999 through 2006
  - FDIC Call Reports
- Small banks <$1 billion assets = 35,442
- Stratified by county type
  - Metropolitan: 3,686 banks
  - Micropolitan:12,739 banks
  - Rural: 19,017 banks

Control Variables & Statistical Model

- Income per capita (BEA)
- Human capital per capita (Schooling)
- Unemployment rate (BLS)

- Fixed-effects pooled panel model

Hypotheses and Summary of Results
(Red 5% significance, Green 10% significance)

Hypotheses	H_a	Metro	Micro	Rural
Economic Activity or Market 'thickness'				
Births/Number of SMEs	>0		🟩	
Deaths/Number of SMEs	>0			
Number of SME/Population	>0	🟩		
Assets/SME	>0	🟥	🟥	🟥
Bank Market Concentration				
Number of banks/Number of SMEs	>0		🟩	🟥
Assets/Population	>0		🟩	
Deposits/Population	>0		🟩	
Bank Loan Performance Factors				
Charge-Off Index	≤0	🟩		
Performance Index	>0	🟩		🟥

Table 2: Hypotheses

Conclusions: Market Thickness

- Concentration of start-ups and small businesses have a significant positive effect on lending in metro counties
  - But small business activity has insignificant coefficients for the micro and rural counties
- Entrepreneurial information can be better leveraged by lenders in urban settings

Conclusions: Asset/Deposit &Market Thickness

- For metro and rural counties, banks assets per capita and short-term liabilities do not affect banks' propensity to lend in these counties

- Assets per SME have positive and strongly significant effects on SME lending in all three types of counties

  - Concentrations of assets per firm bolster lending

  - Banks are better able to diversify portfolios and offset losses

Conclusions: Bank Market Concentration

- The number of banks variable is positive and statistically significant in micro and rural counties

- Firms in markets with a less competitive banking environment, fewer potential entrants, or more existing SMEs face greater difficulty gaining access to credit than where banking is more competitive
  - Esp significant in sparser micro and rural markets

Conclusions: Bank Performance

- The charge-off index is significant and negative for metro counties, but insignificant for micro and rural
  - Charge-offs deter SME lending in urban markets where banks have wider lending options, but micro & rural banks constrained
- The performance index is positive and significant in metro and rural counties
  - Better-performing banks lend more

Future Research

- Incorporate lending into regional endogenous growth model through entrepreneurship

- Test the spatial spillovers that apparently occur in higher-information contexts, such as those exhibited by metropolitan areas

- Use commuter data from the Census to better identify cross-county channels of contact and information flows

Thank you!