Why Banks Matter: Measuring the Impact of Banks on Missouri's Economy

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Introduction

- Banks are an efficient way to bring borrowers and lenders together
- what would happen to Missouri communities if banks did not exist?

How important are community banks?

1. purpose of this study is to quantify the impact that Missouri banks have on the state's economy
2. GDP is the measure of the impact
3. suppose community banks stopped lending for a year

How to compute the impact

Use a general equilibrium model

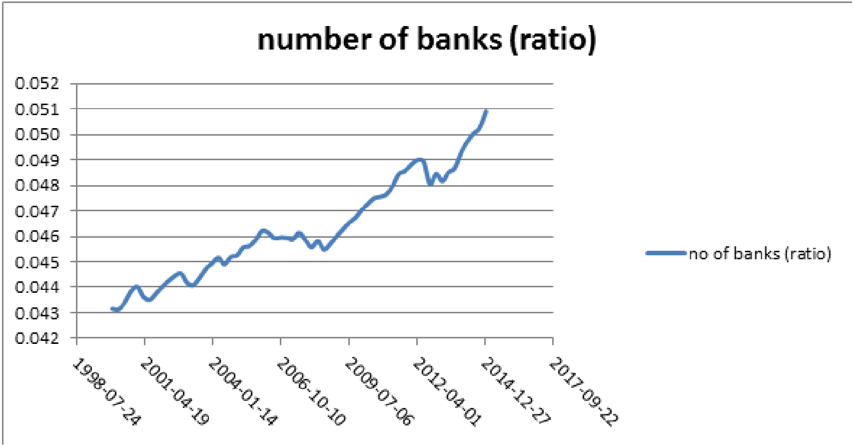
- compute a control path
- compute a treatment path

Main results

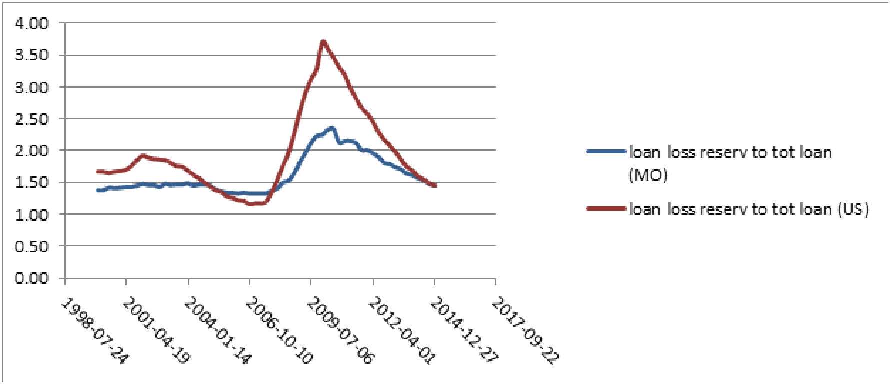
Using members of MO Banker's Assn

- loans that expand production capabilities not less than $10.8 billion a year
- discounted sum of these differences in real GDP is $170.2 billion.
- more than 130,000 jobs
- discounted sum of lost state revenues throughout the 25 year period is $6.5 billion

Banking conditions



Banking conditions



Banking conditions

Two main conclusions

- MO banks were less sensitive to the Great Recession that national average
- MO banks are shrinking relative to national average

The Model

- Basic Ak model
- Growth is endogenous
- Includes the basic consumption-saving decision

The calibration

- The avg annual growth rate is known–1.04 %
- Given the marginal income tax rate and the discount rate
- $\beta = 0.96; \tau = 0.43224$
- Solve for $A = 0.863$

Treatment

Law of motion for loans outstanding

$L_t = L_{t-1} + NL_t - RL_t$

- Call Report data do not provide *NL* and *RL*

Treatment

Law of motion for loans outstanding
$L_t = L_{t-1} + NL_t - RL_t$

- Call Report data do not provide *NL* and *RL*
- Use weighted average maturity of commercial and industrial loans (Survey of Terms of Business Loans)
- compute repayment fraction

Treatment

- avg maturity is 818 days for C&I loans
- asume uniform repayment thru year
- 44.6 % of C&I loans repaid
- avg maturity for Ag Production loans is one year
- With *RL*, one can compute *NL*

Treatment

- allocate loans for banks with locations in MO and "other states
- assume *NL* are evenly distributed across locations

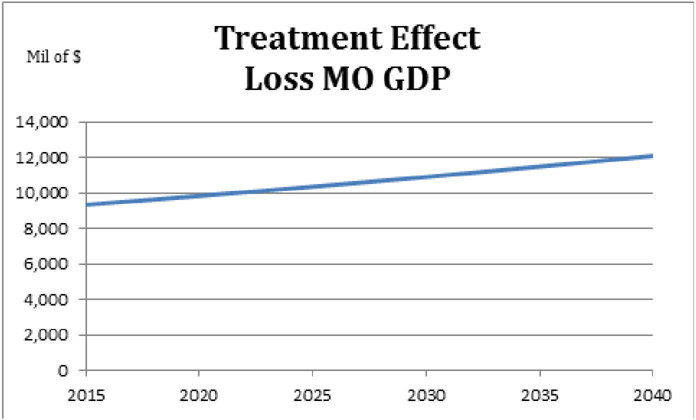
Treatment

- Avg volume of *NL* in MO is $10.8 billion
- note if MO were a "typical state" avg *NL* equals $42 billion

Treatment

- What if MO Bankers Assn member banks did make any new C&I and Ag production loans for one year
- Assume one-time loss of avg volume of loans

Quantiative Impact



Summary

- MO banking industry was less sensitive to Great Recession
- MO banking industry is shrinking
- The impact on the MO economy is quantitatively large

Summary

- PV of lost real GDP in MO is $170.2 billion
- 2016 real GDP i2 approx $260 billion
- At median salary, this is more than 130,000 jobs
- discounted sum of lost state revenues throughout the 25 year period is $6.5 billion