

Discussion of “Road to Stock Market Participation” by Agarwal, Ayyagari, Cheng and Ghosh

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Paper Summary

- Study the effect of PMGSY national road construction program starting in 2000 and ending in 2014 on stock market participation
 - Exploit random variation in when road connecting towns finished
 - Widely used design in development economics
- Establish a reduced-form causal effect of road connection on stock market participation rates in a city
 - Provide additional evidence on two mechanisms: information channel (peer effects) and financial inclusion channel (bank branches)

Roadmap

- A simple model of household stock market participation rates in a given region (Hong, Kubik and Stein (2004)) that will help clarify mechanisms
- Reframe some of the analysis as 2SLS to clarify the limits of what can be learned from PMGSY regarding mechanisms
- Paper could also be positioned from the perspective of coincidental benefits of public goods spending

Model of stock market participation rate in a given region/cohort

- The net cost of participation is $\theta c_i - B(p_s)$
 - c_i drawn from distribution G
- CRRA household participates when certainty equivalent wealth from participating exceeds wealth from not participating
 - $(\alpha - 1)w + B(p_s) > \theta c_i$
- The equilibrium participation rate is
- $p_s = G\left(\frac{(\alpha-1)w+B(p_s)}{\theta}\right)$

Mechanisms

- Financial inclusion channel is captured by α
 - Roads leads to bank branches which offer better financial products
- Information or positive peer spillovers $B(p_s)$
 - Roads lead to better connections and information sharing
- But roads also lead to better economy, i.e. higher w
- If road connections lead to increases in all parameters, then how do we quantify the mechanisms?

Put another way

- Suppose I frame the econometric analysis as 2SLS
- Second stage: participation rate is a function of number of bank branches
- First stage: number of bank branches instrumented with PMGSY
- Is PMGSY excluded?
 - Answer is no since PMGSY could also work through the other channels

Excess spatial variance

- Need to account for overall increases in economics growth or GDP per capita
- How big are the effects on overall city fundamentals?
- Can examine whether subsequent increases in stock market participation rates can be explained just by increases in GDP per capita?
- Excess spatial variance test of social interaction of peer effects...

Modeling a system of equations

- Participation depends on financial inclusion (bank branches)
- But bank branches might also be a response to stock market participation or interest
- Are bank branches driving stock market participation or a response to stock market participation?

Another way to pitch the paper

- As a cost-benefits analysis paper of public goods investment
- What are the coincidental benefits of these public goods investments?
- Paper clearly documents significant coincidental benefits for the financial sector

Conclusion

- Valuable and interesting paper on the consequences of transportation highways for household financial outcomes
- Potentially more research on understanding its impact on the financial sector