Discussion of "Entrepreneurship and Financial Deregulation" by John Bai and Gang Zhang

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Brief Summary

- general motivation: the economic consequences of the U.S. inter-state bank deregulations in 1980s and 1990s?
- this paper: the welfare evaluation, in particular, given increased bank competition?
  - by studying the entrepreneurship formation
  - the existing work on the increased bank entries and the extended credits to firms, esp., young and productive firms
- would be very interesting if this paper clearly nails the trade-off of welfare dynamics, e.g. in the short-run and longer-run or intensive vs. extensive margin

Key Model Ingredients

- so far, a very elegant model with some interesting analytic insights and a range of extended numerical results
  - no aggregate uncertainty
  - occupation choice: firms (entrepreneurs) vs. workers providing labor
  - bank/entrepreneur entry: endogenous and nondegenerate market structure
  - Cournot competition in the loan market
  - segmented local loan market
- An extremely interesting model

Recap of the Model Details

- individuals draw talent/productivity θ from CDF $F(\theta)$ each period, as potential entrants or incumbents
- conditional on entry, produce as entrepreneurs after paying a fixed cost, $w\delta$, subject to a successful rate of η with an endogenous prob. τ
- incumbents choose to continue as entrepreneurs with η or fails the production and become workers for next period
- banks operate in a proportion of ρ_t of total loan market, e.g. no. of segmented markets $= 1/\rho_t$
- banks locate a range of τ_t local customers, i.e. new and incumbent entrepreneurs by offering a contract of r (interest rate), b (loan amount), and m (penalty fees)
- then solve for a symmetric steady state equilibrium

1: results vs. result twists?

- current results
  - Occupation choice of a threshold rule among potential entrants: being an entrepreneur if $\theta > \hat{\theta}$
  - Occupation choice of a threshold rule among incumbents: being an entrepreneur if $\theta > \tilde{\theta}^i$
- under symmetry and at the steady state, a unique equilibrium gives that key comparative statics results:

1. $\frac{\partial \hat{\theta}}{\partial \rho} > 0$, bank's market expansion $\Rightarrow$ fewer firm/entrepreneurship entries
2. $\frac{\partial n}{\partial \rho} > 0$, bank's market expansion $\Rightarrow$ more bank entries locally
3. key: $\frac{\partial \Pi^n_{jt}}{\partial \rho} > 0$ and $\frac{\partial r_{jt}}{\partial \rho} < 0$, bank's market expansion $\Rightarrow$ more profitable banks if entering and lowered borrowing cost benefits existing entrepreneurs

1: results vs. result twists?

- Free entry condition

$$w\rho^{1-\nu}\Omega = \tau\rho M^p \int_{\theta\in\Theta^n} \pi^b(\theta)\mathrm{d}F(\theta) - w\tau^2\Gamma + \rho M^i \int_{\theta\in\Theta^{i,e}} \pi^b(\theta)\mathrm{d}G(\theta)$$

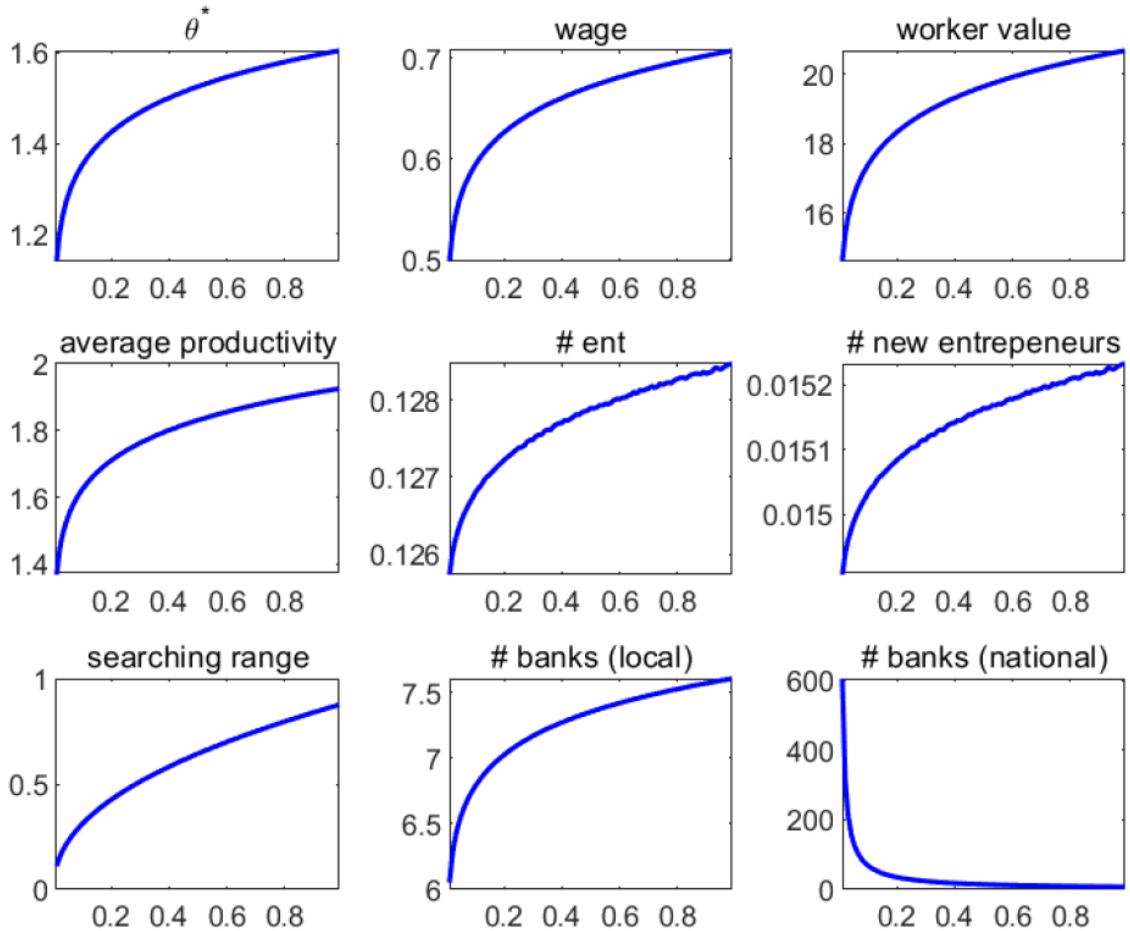
- first and priority of following work: decomposing the impacts into

1. intensive margin: operating banks/entrepreneurs more profitable
2. extensive margin: fewer entrepreneur entries are weaker but conditional on entry, more productive firms are created

- relative strength?
- quantitatively, how fast net welfare gain can be maximized? interpretations of speed given $\beta = 0.96$

2. Mapping to the Data

Comparative statics to different ρ



what is the ρ in the reality of interstate banking deregulations? how fast is this evolved over time?

2. Mapping to the Data

* Memo on Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 (Bill Medley, Kansas Fed)

- "Throughout the 1980s and early 1990s federal lawmakers launched several efforts to remove the interstate branching prohibitions, **but their proposals failed, due in part to opposition from a coalition of small banks and insurance companies. The banks feared they would face a competitive disadvantage once large financial institutions entered their markets,**"
  - bank heterogeneity matters in addition to firm/entrepreneur heterogeneity

- "In addition, smaller banks pushed for, and received, a provision that would allow states to **limit interstate entry to the acquisition of existing banks** and also set a minimum age requirement of up to five years for the banks that could be acquired."
  - besides exploring $\rho \uparrow$ in a symmetric way, *M&A* could be an interesting angle, modeling the dispersion of productivity of banks?

3: complications from the deposit side

- Drechsler, Savov and Schnabl (2017, QJE): bank competition matters a lot on the bank profit driven by the deposit spread
- currently, deregulations reduce the market power of banks
- costs of banks in more competitive local segment could well go up that complicate the arguments on $\Pi^n_{jt} \uparrow$
- it's fine to ignore the one side, loan or deposit side in general
- but a large literature is now on this in case of changing bank market structure

4: complications of the multiple equilibria?

- with bank heterogeneity, richer strategic plays could be there
  - a symmetric equilibrium, by definition, is an "accommodative" equilibrium, i.e. no dynamic and strategic play to prevent the rivalry banks' entry
- Besanko, Doraszelski and Kryukov (2014): in a price-setting environment, shows that dominant/ more productive firm can set aggressively low price to drive out follower/less productive firms in the short-run and then take the oligopoly play in the longer-run, i.e. an aggressive equilibrium
- Sweeting, Jia, Hui and Yao (2022): buying power on the demand side helps sustain uniquely the accommodative equilibrium by killing the multiplicity
- in case there is a challenge here from the referee
  - good to argue that bank-firm/entrepreneur linkages give the demand side of the loans some bargaining power to significantly affect the industry dynamics of supply side, i.e., banks, to uphold the "symmetry" assumption

Additional Comments

- implications from the "endogenous" exits, currently $1-\eta$
- micro evidence: measure of loan market expansion instead of a dummy variable and a lot of dependent variables to be examined
- to better motivate the assumptions: e.g. the functional forms of $Pr(e_{jt}(\theta))$, probability of verification of state, and the reservation value $\rho_t^{1-\nu}\Omega$
- details needed on the model solutions and simulations
- insights on the misallocations of bank credits?

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- details needed on the model solutions and simulations
- insights on the misallocations of bank credits?
- a really fascinating and tractable framework

Best of lucks and look forward to reading the draft!

Appendix: Some Technicalities

- When deriving the optimal contracts, missing something in red
  - $r_{it}(\theta) = \frac{\theta\zeta}{w_t^{\zeta}}(\sum_{i=1}^{n_t} b_{it}(\theta))^{\zeta-1}$
  - (RC) $m_{jt}(\theta) \leq \omega_{jt}(\theta)\theta(\sum_{i=1}^{n_t} \frac{b_{it}(\theta)}{w_t})^{\zeta}$
- confusions of notations $\hat{\theta}$ vs. θ^*