

# Panel on “Financial market infrastructure and inequality – COVID-19 and beyond”

Robert M. Townsend

*Elizabeth & James Killian Professor of Economics, MIT*

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# Financial Infrastructure and Inequality

## ❖ Overall question

- “How financial infrastructure ... can affect financial inclusion and inequality.”
  - The physical or digital infrastructure that can help facilitate financial services
  - The policy and regulatory actions that governments can take to improve these types of infrastructure

# Question "How does financial infrastructure affect inclusion and impact inequality? What is the evidence pre-COVID?"

- ❖ Historical answer: policy with regards to (physical) branch banking
- ❖ “Finance, Growth, and Inequality across Local Spatial Markets: The Dynamics of Bank Expansion” (Ji, Teng and Townsend 2020)
  - From 1986 to 2011, identify 1,426 branch locations, most newly opened, and from these we define local markets
- ❖ Importance: Lessons from Data and Model
  - Identify dynamics with transition paths, delays, uneven effects across local markets, and seeming perverse impact
- ❖ Advice to policymakers
  - To build in some commitment against political pressure, if possible, or to choose another path otherwise

# Good Results: Big impact on Growth and Financial Access

- ❖ The model generates a 10-year cumulative GDP growth of 80%
  - As compared to 117% in the data
- ❖ 41.2% is attributed to labor growth
  - Farmers leave the agricultural sector to become workers
- ❖ 24.7% to capital growth
  - As households accumulate wealth and invest as in own business or save through intermediation
- ❖ The model reproduces a significant amount of the variation in credit access and entrepreneurial activity across markets that resemble the patterns in the data
  - Increased financial access

# Intermediate, Mixed Results: Kuznets Curve

- ❖ The model generates a hump-shaped income Gini path, at first increasing and then decreasing
  - Matches the actual dynamics in the data
- ❖ Opening branches for unbanked population allows a relatively small number of talented entrepreneurs to access credit and earn more income
  - Financial access increases
  - Higher Gini in early years of this period
- ❖ The increasing demand for labor over time pushes farmers to gradually leave the agricultural sector
  - Eventual shortage of workers and a significant wage takeoff
  - Gini falls in later years

# Unanticipated Results: A Warning for Policymakers

- ❖ Economy-wide average wage decreases in initial years of bank expansion due to a composition effect
  - Farmers become wage earners
- ❖ Local wage takeoffs occur at different points in time across markets
  - The cross-market income inequality among workers increases
- ❖ Large welfare gains but only eventually

# Moving to Digital Banking, Digital Payments, as in Brazil: PIX and Guidance for CBDC

- ❖ Through the lens of the Thai model, what if they had the technology in 1986
- ❖ As anticipated: Digital Banking eliminates much of the regional heterogeneity and quickly
  - Though impacts on other dimensions are not instantaneous
- ❖ Revealing experiments on CBDC
- ❖ Replacing part or all of paper currency with interest bearing accounts, while letting branch expansion lower credit costs as in the baseline
  - This eliminates currency from household wealth portfolios held for consumption smoothing – increases welfare
  - Modest impact
- ❖ Compare to lowering credit costs to zero in the initial year, while letting branch expansion lower deposit costs as in the baseline
  - This removes the use of currency by entrepreneurs to self-finance the purchase of capital
  - Has a much larger impact
- ❖ Through the lens of the model: Complementarity-- the whole is greater than the sum of the parts, don't underestimate the savings part

# Obstacles to Trade, Need to Distinguish Too, Matters for Policy

- ❖ “Distinguishing Constraints on Financial Inclusion and Their Impact on GDP, TFP, and the Distribution of Income” (Dabla-Norris, Ji, Townsend and Filiz-Unsal 2020)
- ❖ Multiple sources of financial frictions: financial access costs, collateral constraints, and bank mark-ups due to verification costs
- ❖ Most binding constraints vary across countries and are typically not obvious from the data alone
- ❖ Getting it wrong, relaxing the collateral constraint may significantly boost GDP in one country, but may not be as effective in other countries, where financial inclusion is constrained by a high borrowing cost
- ❖ Research is relevant: This model have been used for policy advice at the level of country desks at the IMF and in overall guidance

# Question "How did existing financial infrastructures attenuate or exacerbate the impact of COVID on vulnerable households?"

- ❖ In the US, currently implemented policies are far from successful
  - Fed Main Street and PPP relies on commercial banks who have previous relationships with customers
- ❖ The ability to target ex post efficiently, e.g., to key SMEs in supply chains, through existing legacy information and financial infrastructure is quite limited
- ❖ The virus has clearly revealed chronic gaps in information and financial infrastructure for SMEs that have been there all along

# Question "Which measures could central banks take to better support vulnerable households in the recovery and in the longer term through financial infrastructure"

## ❖ Contracts as the object traded

- The needed innovation in this context
  - Programmed contracts that allow formal automation of informal relationship lending, with the tools of cryptography enabling options and agreements among strangers

## ❖ Securitization

- Needed innovation: Partial information, rather than the endpoints, completely private vs. full disclosure, can be the new optimal design to prevent unravelling

## ❖ Database infrastructure: creation, access, and use

- We need to better utilize existing data, organize across data sets, create new data as needed, and rely more on electronic transactions
  - Data are inherently a public good
  - Privacy aspects are key to protect customers and provide incentives for participation
  - Multiparty computation allows encrypted line items in financial accounts to be aggregated for analysis while preserving total privacy

## ❖ The matching of parties and the trading of contracts

- A central third party is not necessary anymore

## ❖ Ensuring competition across platforms: overall regulatory blueprints