

# Discussion of “The Impact of ICTs on Banks, Credit, and Savings: An Examination of Brazil”

by Flavia Alves

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**Question:** How does ICTs reshape the banking sector in Brazil?

**Results:** The impacts on **public banks** and **private banks** are very different!

- Private banks close branches, while public banks do not
- Private banks extend 14% less credits, while public banks extend 35% less
- Savings and long-term deposits in private banks drop by 24% and 81%, respectively, while those in public banks by 46% and 16% (insignificantly)
- The effects are stronger in rich/urban/big municipalities

### Contribution:

- The impact of technology on banking sector is especially relevant for developing countries
- Most of researches highlight the bright sides
  - Africa (D'Andrea and Limodio, 2023), Mexico (Higgins, 2022)
- This paper presents overall impacts for public and private banks

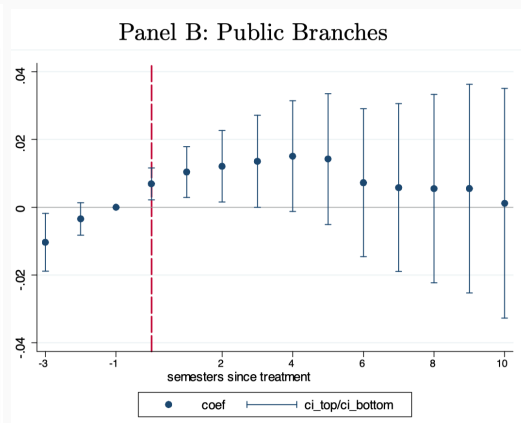
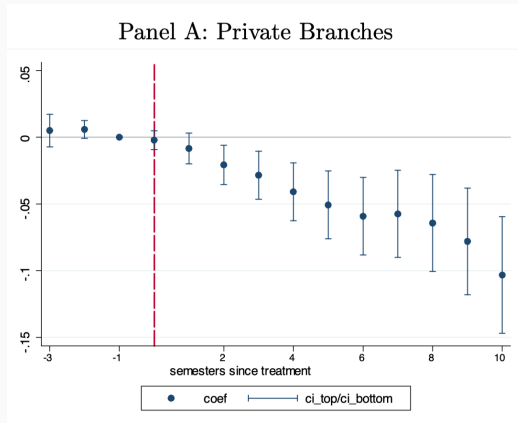
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### My comment

- Understanding the effects

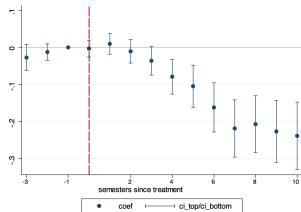
## Branch Closure — Interesting but not Surprising



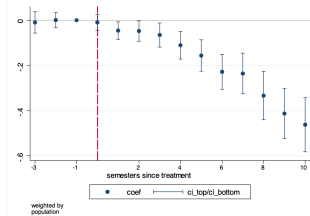
Banks for All (2004): Brazilian federal government subsidizes government-owned banks to expand branches in underbanked cities (Fonseca and Matray, 2021)

# Savings — Interesting and Somewhat Surprising

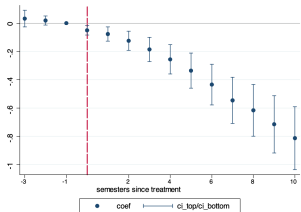
Panel A: Savings Deposits at Private Banks



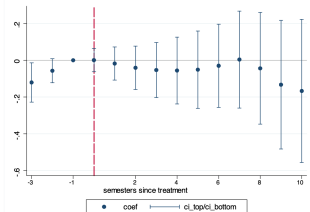
Panel B: Savings Deposits at Public Banks



Panel C: Long-Term Deposits at Private Banks



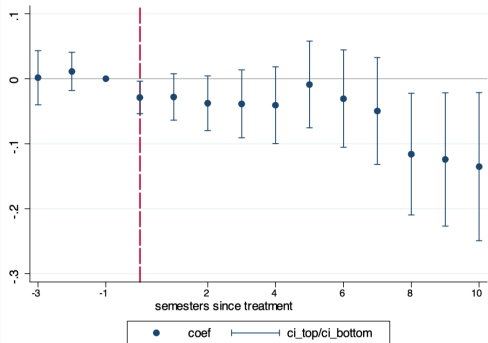
Panel D: Long-Term Deposits at Public Banks



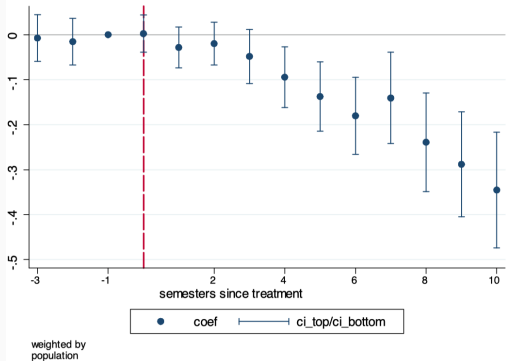
- Long-term depositors in private banks are more tech-savvy
- Saving depositors in public banks are more tech-savvy

# Total Credit — Super Interesting and Shocking

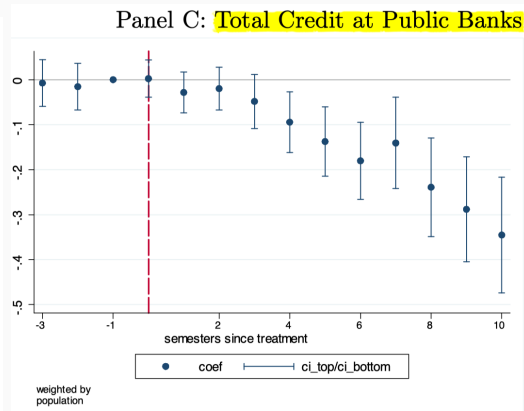
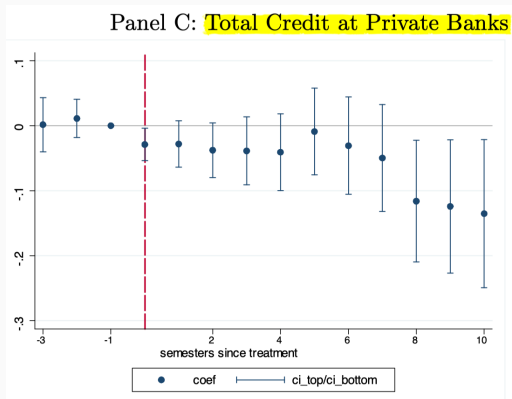
Panel C: Total Credit at Private Banks



Panel C: Total Credit at Public Banks



# Total Credit — Super Interesting and Shocking



What happens!!!



After 4G, public banks keep their branches, savings deposits drop and total credits drop

- **View 1:** public banks lose some their tech-savvy depositors and hence their lending drops
- Where do these depositors go?
  - Private banks? **Unlikely**
  - Outside of banking sector? Then **4G crowds out credits from public banks**
- A deposit channel of 4G impact

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- **View 2:** 4G brings new non-bank lenders, and substitute the lending from public banks
- 4G brings in more competition
- A lending channel of 4G impact

- **View 3:** public banks gain market power after private banks exit, hence they charge higher spreads and drive out banks depositors and borrowers

## Branch-Reliant Banks:

- Keep branches
- Price ↑

### Branch-Reliant Banks



### Non-Branch-Reliant Banks



## Non-Branch-Reliant Banks:

- Digital quality ↑
- Attract more tech-savvy consumers
- Branch closures
- Higher profit margin → entrants
- Price ↓

Tech-Savvy Consumers

Non-Tech Savvy Consumers

Tech-Savvy Consumers

Non-Tech Savvy Consumers

Tech-Savvy Consumers

Tech-Savvy Consumers

## Non-Tech Savvy Consumers:

- Suffer from more expensive financial services
- Lack of convenience
- Less financially included

## Tech-Savvy Consumers:

- Enjoy cheaper financial services
- More financially included

Why is it important to separate the three views?

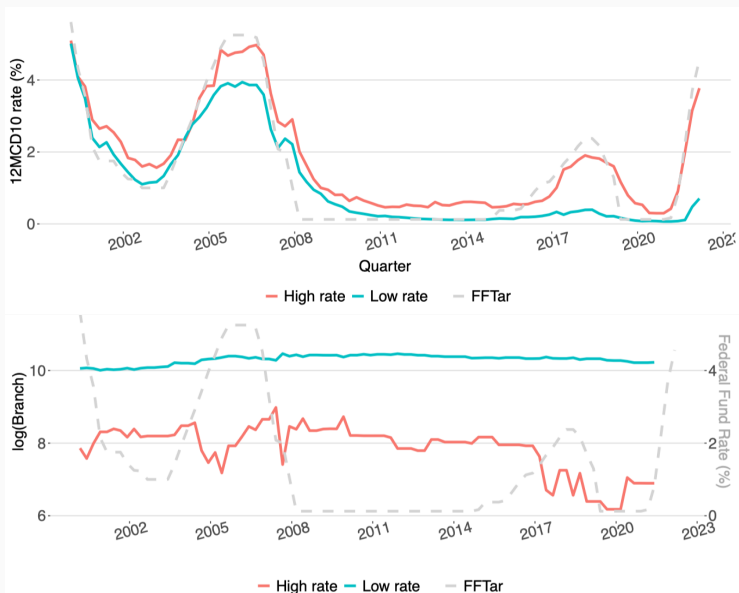
- Branches
  - **View 1** and **View 2** still support the subsidization of branch for public banks
  - **View 3** would cast a doubt on such a problem in the digital age
- Credits
  - **View 2** would suggest a positive consequence of 4G on real economy
  - **View 1** and **View 3** would suggest the opposite

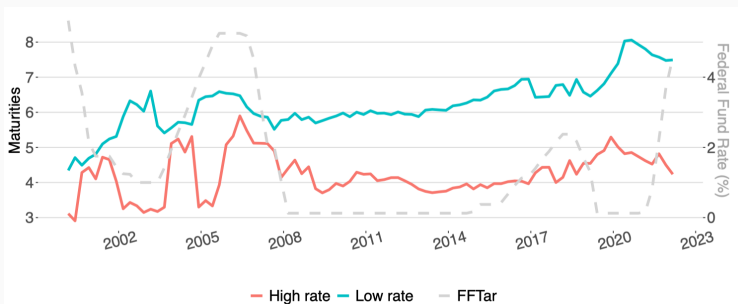
After 4G, private banks close branches, lose their depositors, but total credits do not drop that much

- The business model with branches (Drechsler et al, 2023)
  - Branches are costly to remain and require a steady stream of payment, but they bring franchise value
  - Franchise value allows banks to charge a stable spread (NIM) on deposit and lending markets

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  - Branches are costly to remain and require a steady stream of payment, but they bring franchise value
  - Franchise value allows banks to charge a stable spread (NIM) on deposit and lending markets
- The business model without branches
  - Fixed cost is gone but franchise value is gone as well
  - Banks compete fiercely and offer competitive deposit rates
  - Deposits and whole-sale funding are almost substitutes  $\implies$  4G does not crowd out lending
  - BUT! The asset composition changes!







- Very interesting paper
- Well-written and careful execution
- Good luck in your job market!