

Discussion of

# Price Regulation in Two-Sided Markets: Empirical Evidence from Debit Cards

by Vladimir Mukharlyamov and Natasha Sarin

Vadim Elenev

Johns Hopkins Carey

DC Juniors Finance Conference — May 2019



# Motivation

- Theory of two-sided (platform) markets
  - ▶ How do platform set prices? Marginal cost pricing vs. subsidy vs. rent
  - ▶ How do platform pricing decisions affect prices in the direct market?
    - ★ E.g. How does the price of an Xbox and Xbox Live affect the prices of video games?
    - ★ E.g. How do interchange fees affect the prices of goods sold via card?
- Policy: consumer finance regulation

# Motivation

- Theory of two-sided (platform) markets
  - ▶ How do platform set prices? Marginal cost pricing vs. subsidy vs. rent
  - ▶ How do platform pricing decisions affect prices in the direct market?
    - ★ E.g. How does the price of an Xbox and Xbox Live affect the prices of video games?
    - ★ E.g. How do interchange fees affect the prices of goods sold via card?
- Policy: consumer finance regulation
  - ▶ What are the distributionary consequences of price controls on debit card interchange fees?
  - ▶ Do consumers benefit?

## This paper

- Legislation ("Durbin Amendment") + Fed regulation: card networks subject to (binding) constraint on how much they can charge merchants for processing debit card transactions when debit cards are issued by large banks (assets > \$10M)

## This paper

- Legislation ("Durbin Amendment") + Fed regulation: card networks subject to (binding) constraint on how much they can charge merchants for processing debit card transactions when debit cards are issued by large banks (assets > \$10M)
- Diff-in-diff 1: do large banks charge checking account customers differentially more than small banks after reform?
  - ▶ Yes! Enough to fully offset loss in interchange revenue!
  - ▶ Interpretation: unable to extract rents from merchants, banks stop subsidizing consumers.

## This paper

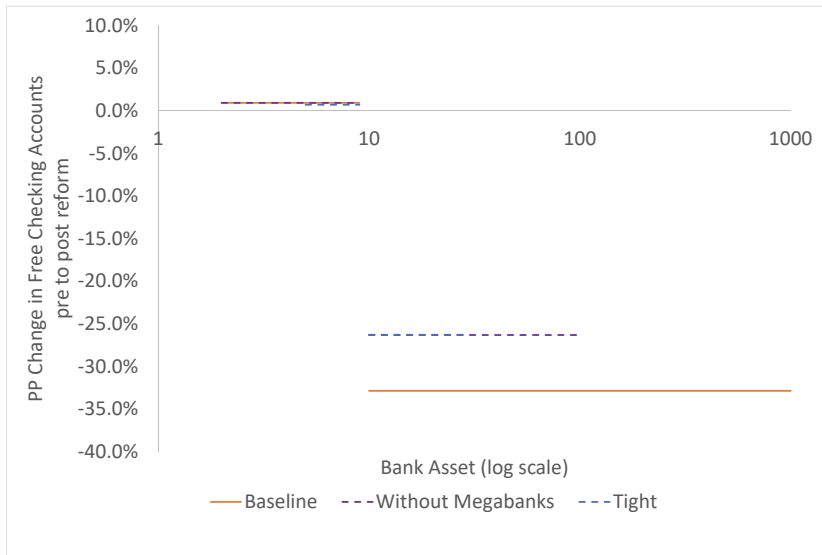
- Legislation ("Durbin Amendment") + Fed regulation: card networks subject to (binding) constraint on how much they can charge merchants for processing debit card transactions when debit cards are issued by large banks (assets > \$10M)
- Diff-in-diff 1: do large banks charge checking account customers differentially more than small banks after reform?
  - ▶ Yes! Enough to fully offset loss in interchange revenue!
  - ▶ Interpretation: unable to extract rents from merchants, banks stop subsidizing consumers.
- Diff-in-diff 2: do gas stations in zipcodes with large drops in interchange fees paid (e.g. where large bank customers shop) cut prices differentially more than in zipcodes with small drop in interchange fees paid after reform?
  - ▶ Only partially!
  - ▶ Interpretation: Merchants don't pass all the savings to consumers, so reform increases merchant after-fee margins.

# Comments

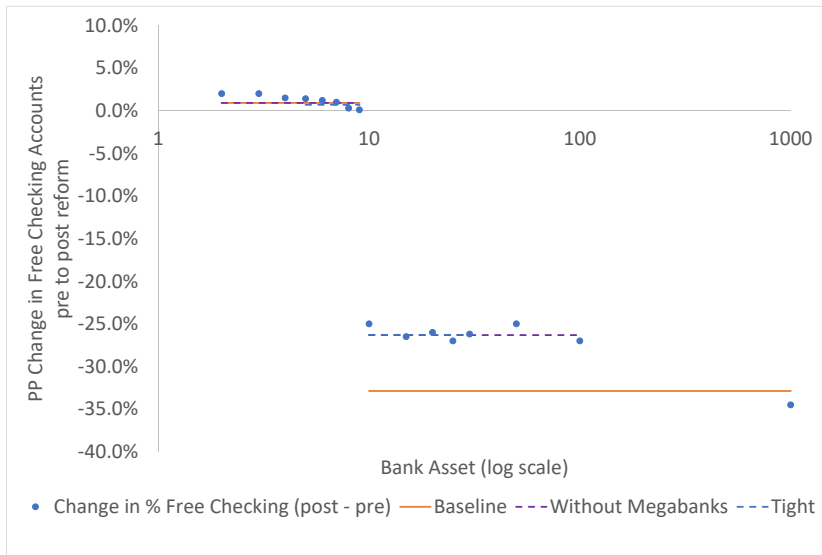
- Really interesting paper! Impressive combo of many datasets to trace through the effects! I learned a lot!
- Comments on first stage: banks fees
  - ▶ What else happened to large banks in 2010-2011?
  - ▶ How does bank market power affect response to regulation?
- Comments on the second stage: merchant pricing



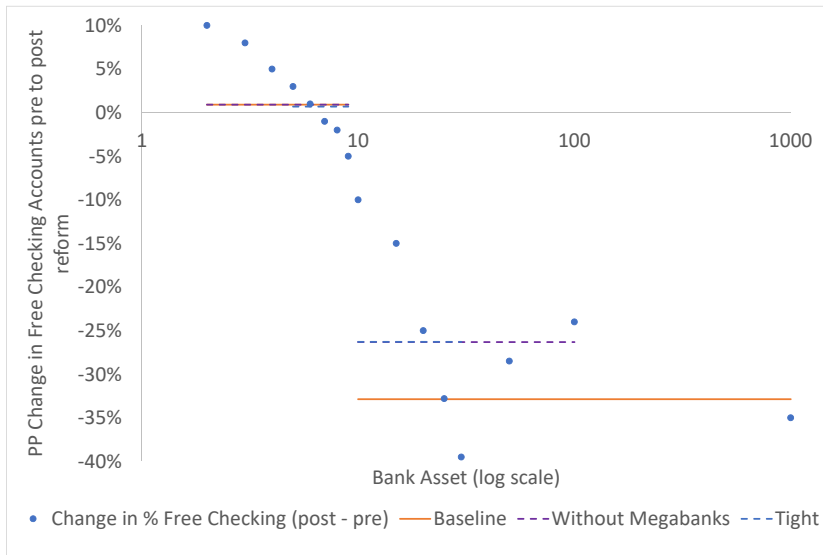
# Diff-in-diff coefs average across banks of different sizes



# Case 1? Discontinuity at cutoff consistent with Durbin



## Case 2? Continuous across cutoff i.e. other story



# Puzzles

- Banks with most market power raise consumer fees the most in response to loss of interchange fee revenue
  - ▶ Competitive platform: net zero profits  $\implies$  subsidize one side, earn rents on the other
    - ★ Regulation: cap rents  $\implies$  lower subsidies
  - ▶ Monopolistic platform: net positive profits
    - ★ Regulation: cap rents  $\implies$  lower profits, less/no effect on subsidies
  - ▶ Data suggests the opposite! Why? Is HHI (concentration) the best measure of market power?
    - ★ Evidence: counties whose bank HHI increased also had fees that increased
    - ★ But maybe higher marginal costs both lead to higher fees and bank exit i.e. higher concentration?
    - ★ Maybe dispersion in bank market power is due to dispersion in deposit stickiness?

# Merchants' pass-through of interchange fee savings

- Treated counties = ones where interchange fee fell the most
  - ▶ Fees charged by small banks post reform = proxy for fees charged by all banks pre-reform
  - ▶ Strong partial equilibrium assumption! Lots of GE reasons why regulation could change prices in unregulated markets too!
- Paper: effect on consumers = increase in account fees - decrease in merchant margins gross of interchange fees
- For future work: Effect of reform on competition in the merchant markets?

# Merchants' pass-through of interchange fee savings

- Treated counties = ones where interchange fee fell the most
- Paper: effect on consumers = increase in account fees - decrease in merchant margins gross of interchange fees
  - ▶ But decrease in merchant margins = decrease in prices + increase in costs
  - ▶ Do gas station margins decrease because their supplies increase prices? Among consumers, gas retailers, and major oil companies, most market power probably lies with the latter
  - ▶ Maybe consumers even worse off than paper suggests!
- For future work: Effect of reform on competition in the merchant markets?

# Merchants' pass-through of interchange fee savings

- Treated counties = ones where interchange fee fell the most
- Paper: effect on consumers = increase in account fees - decrease in merchant margins gross of interchange fees
- For future work: Effect of reform on competition in the merchant markets?
  - ▶ Pre-reform: dispersion in interchange fees as bigger merchants negotiate discounts
  - ▶ Post-reform: all merchants pay same low interchange fees on cards issued by large banks
  - ▶ Does this make smaller merchants more competitive, increase firm entry, etc.?

# Conclusion

- Interesting and comprehensive paper! Common cautionary tale for policymakers.
  - ▶ Government's ability to reallocate resources is limited by supply and demand elasticities of market participants.
  - ▶ Incidence of regulation often doesn't fall on who is regulated
- RD to sharpen identification
- Can bank market power, county merchant treatment be measured better?
- GE effects of reform provide avenues for future research.