

Taxation when markets are not competitive: Evidence from a loan tax

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*Discussion by Leticia Juarez
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What is this paper about?

This paper → Study how tax deadweight loss varies by market structure

- ① Pass-through estimates of unexpected introduction of loan tax in Ecuador
- ② Quantitative model including (i) Bertrand-Nash competition, (ii) credit rationing, and (iii) joint maximization.

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Results: not accounting for lender collusion overstates the welfare costs of taxes

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Mechanism: Under Bertrand-Nash competition, borrowers bear a higher burden of the tax, leading to a greater deadweight loss per unit of revenue raised. In contrast, in a joint maximization environment, the tax falls primarily on banks, reducing its distortionary effect on borrowing.

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- New structural model of commercial lending including collusion

- ① Demand Effect: how can we distinguish between supply and demand effects?
 - Cannot include firm-time fixed effects since it drops coefficient of interest
→ Can extend the sample to all loans such that you can add this FE?
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- ❸ Buyer-seller relationship lengths affect pass-through of shocks ([Heise, 2019](#))
 - Control for length of bank-firm relationship
 - Control for other characteristics of the relationship/contract

More concentrated markets have higher interest rates

- Can you distinguish if this is because of markups or marginal costs?
→ include FE/financial variable to control for marginal costs
- If this is all about markups..
 - ① Trade-off: there is lower pass-through of taxes but higher interest rates.
If there were competition, interest rates would be lower.
 - ② Markups lead to misallocation so, does this compensate the “gains” of smaller deadweight loss per unit of revenue raised from taxes?
→ Nice exercise to make

Do we need a collusion term/story to have incomplete pass-through?

$$r_{ikmt} = \frac{mc_{ikmt}}{1 - d_{ikmt}} - \frac{1}{\underbrace{\frac{\epsilon_{kk}}{r_{ikmt}}}_{\text{Bertrand-Nash}} + v_m \underbrace{\sum_{j \neq k} \frac{\epsilon_{kj}}{r_{ijmt}}}_{\text{Alternative Conduct}}}$$

- Trade literature variable markups: CES demand + discrete number of firms
 → + productive firms, higher market shares, higher markups, lower pass-through
 (Atkeson and Burstein, 2008)¹²
 → Model of banks with variable markups Herreno (2023)

¹Specifics on this on [Arkolakis and Morlacco \(2017\)](#)

²Variable markups are achieved by means of strategic firm behavior in oligopolistic competition (Cournot or Bertrand give = results)

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- Is there a way to test variable markups vs collusion?
- Map of the model to empirics?
 - 1 Which is the right variable to use in the regression?
→ Clarify why HHI instead of the number of banks, etc.
 - 2 Does it have to be at the market level, or can it be at the firm level?
→ Try the market share of the bank interacted with the shock

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- Bank side:
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- Firms’ side:
 - Are these “less harmed” firms connected to concentrated markets increasing their sales, employment, etc?

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- Paper on defining labor markets ([Fogel, 2022](#))
→ Can think of the analogous version for banks

- Abstract: "If competition were stronger, the effect of 10%.." Can you say how much is the increase in competition that leads to that effect?
- Do you control for time events that could affect differently more concentrated markets?
- Page 16, two paragraphs have a similar sentence "In addition, we include bank and firm fixed effects to control for unobserved, time-invariant heterogeneity in the determinants of interest rates."
- Table 12 is too simple given the importance for the paper
→ calculate the standard errors of the calibrated values and test whether the incidence and excess burden differ from the Bertrand-Nash and joint maximization cases (more aligned with Appendix G).

Great Paper!

- Alviarez, Vanessa I, Michele Fioretti, Ken Kikkawa, and Monica Morlacco.** 2023. "Two-sided market power in firm-to-firm trade." National Bureau of Economic Research.
- Arkolakis, Costas, and Monica Morlacco.** 2017. "Variable demand elasticity, markups, and pass-through." *Manuscript, Yale University*, 16.
- Atkeson, Andrew, and Ariel Burstein.** 2008. "Pricing-to-market, trade costs, and international relative prices." *American Economic Review*, 98(5): 1998–2031.
- Fogel, Jamie.** 2022. "What is a labor market? classifying workers and jobs using network theory." PhD diss.
- Heise, Sebastian.** 2019. "Firm-to-firm relationships and the pass-through of shocks: Theory and evidence." *FRB of New York Staff Report*, , (896).
- Herreno, Juan.** 2023. "Aggregating the Effect of Bank Credit Supply Shocks on Firms." mimeo.