Firms as tax collectors

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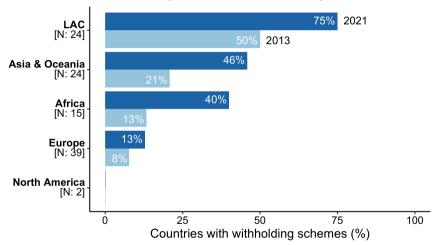
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Motivation

- Governments in developing countries struggle to raise revenue and build tax capacity
 - Usually rely on ↑ taxes, ↓ non-compliance
- Fundamental transformations of tax administration to achieve large-scale capacity
 - Recent evidence of dramatic returns to improved tax admin [Basri et al. AER'21]
- Withholding regimes
 - Collection systems where 3rd parties collect/remit taxes owed by related parties
 - Income tax, VAT built-in mechanism, Credit card companies
 [Besley & Persson, 2013; Waseem, 2020; Brockmeyer & Hernandez, 2019]
- Withholding of indirect taxes is widespread, but largely understudied



Withholding of indirect taxes by region





This paper

What are the implications of delegating tax collection duties on firms?

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- 1. Do withholding regimes lead to an increase in **revenue**? **YES** •
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- 3. Do linked firms increase or decrease their reported income? YES

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We address these questions by combining:

- A major reform that changed how business tax is collected, holding all else constant (tax base, tax rates, etc.)
- Monthly admin tax data in the City of Buenos Aires, Argentina

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 - 1. Direct payments
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 - 3. Other Withholding

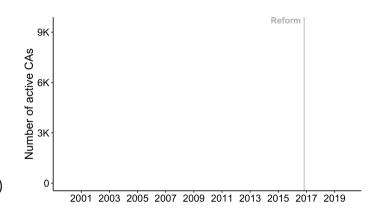
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 2015 sales > AR\$ 60M (~p97)

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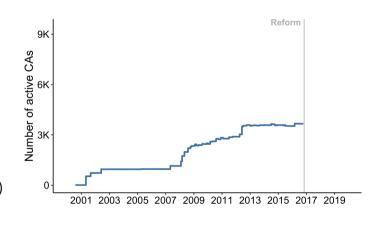
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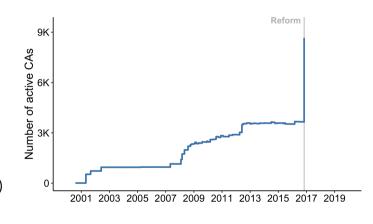
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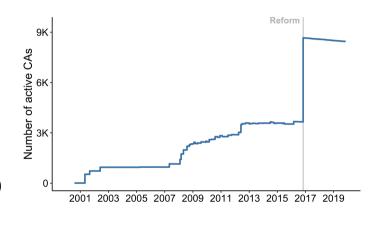
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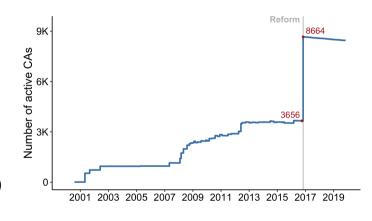
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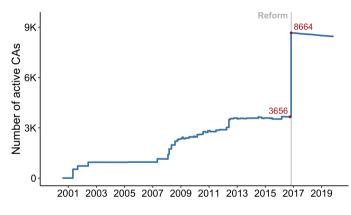
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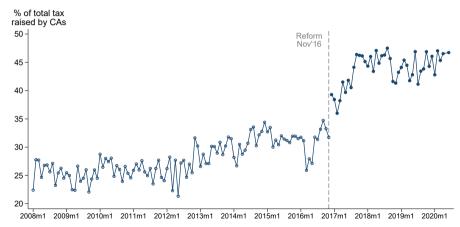
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Implication: More tax collected at source by CAs in lieu of direct payments

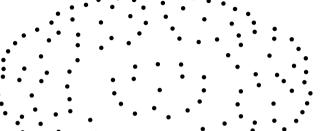
Macro evidence Withholding

Increase in tax collected through withholding (\sim 30% to 45%)

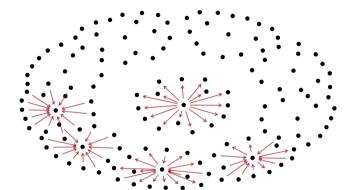


- Sample: 250K firms
 - 78% of total TT revenue
- Sep 2015 Dec 2020
- Monthly filings for all firms
- B2B transactions for 3000 CAs and their partners

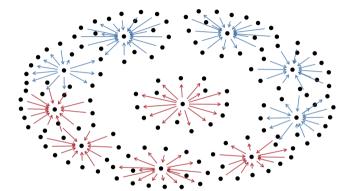
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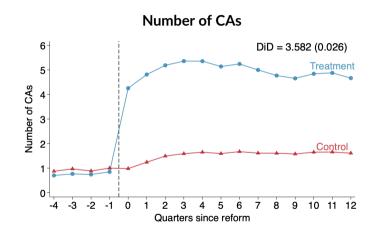


Strategy & First Stage

- Firms not directly targeted by the reform; but linked to CAs
- Control: linked to old CAs
- Treatment: linked to new CAs
 - i.e., experience an ↑ in the # CAs they interact with

Strategy & First Stage

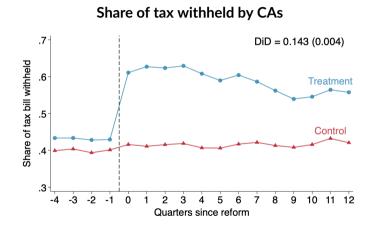
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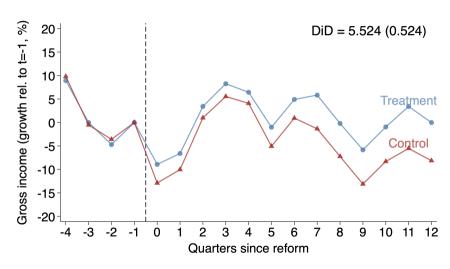
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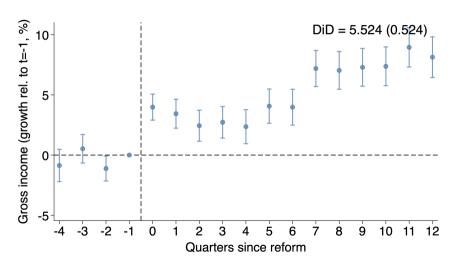
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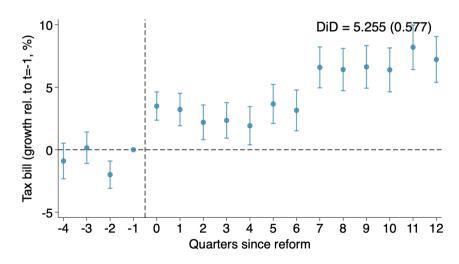
Effect on Sales (Levels)



Effect on Sales (DiD)



Effect on Tax liability (DiD)



Interpretation of results and second quasi-experiment

Interpretation of results on linked firms Conceptual framework

- Third-party information reporting \rightarrow enforcement perceptions
- Withheld amount → imposes a **lower-bound** on self-reported sales & tax owed

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Second quasi-experiment: Reduction of withholding by banks

- Use a different reform to test robustness and symmetry of a decrease in withholding
- \downarrow in bank withholding should trigger \downarrow in reported sales

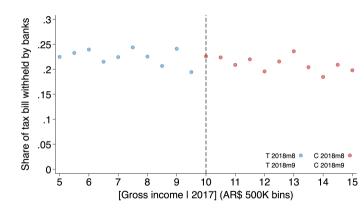
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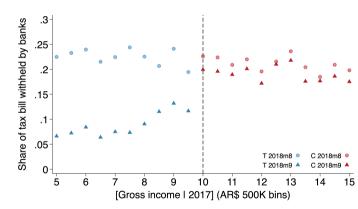
Relationship btw firm size and bank withholding



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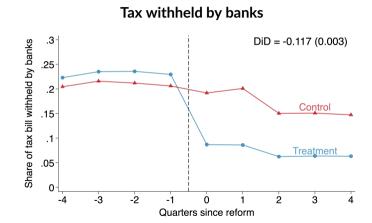
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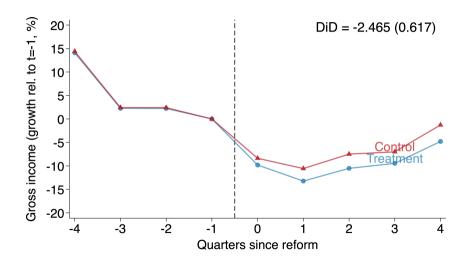


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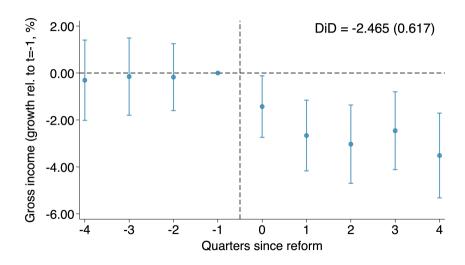
- Diff-in-Diff:
- Control: AR\$ 10 and 20M
- Treatment: AR\$ 5 and 10M



Response of linked firms: Gross income (levels)



Response of linked firms: Gross income (DiD)



Closing remarks

Appointing firms as tax collectors is a promising tax administration tool

- 1. Does not harm the activity of the **collector**
- 2. Leads to increased reported income of linked firms
 - Third-party info → enforcement perceptions
 - Withheld amt → lower-bound on self-reported sales
- 3. Overall, increases tax revenue

Next step

- Did this policy distort choice of trade partners away from CAs? A priori, no 🖸

Thank you!

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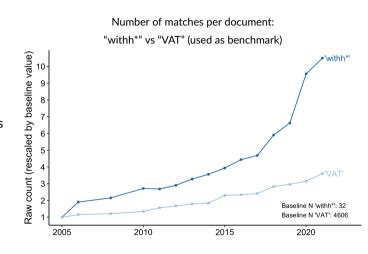
Appendix

Related literature

- Tax capacity, compliance, and development
 - Musgrave (1969), Besley & Persson (2013), Slemrod & Yitzhaki (2002), Keen & Slemrod (2017),
 Basri et al (2021), Bergeron et al (2021)
- Behavioral responses to tax collection & info reporting
 - Remittance invariance: Slemrod (2008, 2019), Pessina (2020), Kopczuk et al (2016)
 - Info reporting: Pomeranz (2015), Carrillo et al (2017), Almunia & Lopez-Rodriguez (2018)
 - Withholding: Waseem (2020), Brockmeyer & Hernandez (2019), Carrillo et al (2011)
- Network effects of taxation schemes
 - Gadenne et al (2020), Gerard et al (2019)

Text analysis

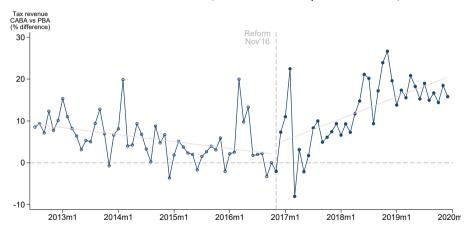
- Text analysis of EY's reports:
 - Match strings containing "withh*" (e.g., "withholding, withheld, withhold", etc.)
 - Split into country chapters where possible (2013 onwards)
 - Binary indicator if a country's chapter contains any matching strings
- There's a sharp increase in the number of matches over time



Macro evidence

Tax revenue

Increase in tax revenue (relative to a comparable district)

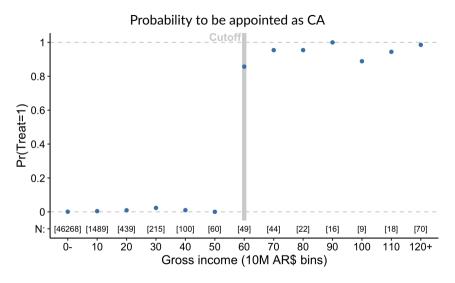


Direct effect on CAs

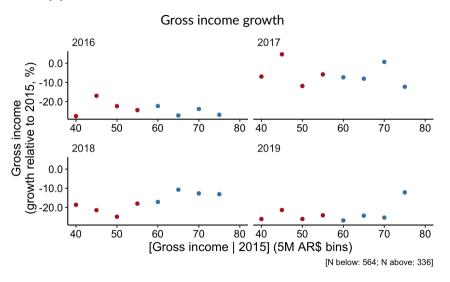
- Nov'16 reform: large firms appointed to collect taxes on behalf of clients/suppliers
- Rule: firms with 2015 annual sales > AR\$ 60M (\approx p97)
- Empirical strategy:
 - Document expansion of withholding net
 Probability to: (i) be appointed as CA; (ii) start withholding
 - (2) RDD: response of newly-appointed CA firms Compare changes in gross income (sales) close to the 60M cutoff



Appointment as CA



Response of appointed CAs



Direct effect on CAs: summary

- CAs activity does not seem to be affected
- Explanation: These are large/formal firms
 - Collecting taxes from others is not an administrative burden, already have professional accountants in-house
 - These firms are not financially-constrained, so no "cash-flow benefit"
 - Scrutiny from govt does not induce higher compliance as they are already formal



Turnover Tax & Collection

Subnational Turnover Tax

- Tax base: levied on gross income, no deductions for expenses
- Tax rates: typically vary from 1% to 5%
- Applies to B2B and B2C transactions (classic "cascading effects")
- Applies to local and out-of-jurisdiction transactions
- Distortive but simple: Largest source of own revenue ($\sim 75\%$)
- Imposed in each of the 24 jurisdictions in Argentina
 Note: National VAT (built-in self-enforcing incentives already in place)

- Tax collection:

- Monthly electronic filing
- Outstanding balance = tax owed amount withheld by CAs (if any)
- We exploit an exogenous and sharp increase in the number of CAs



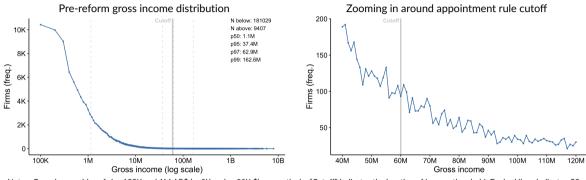
The reform

Indirect collection of Turnover Tax

- Provinces rely on Turnover Tax as the main source of revenue
- Historically: part of the tax payed through direct payments, some firms acted as collection agents (CAs) and withheld the rest
 - Buyer: subtract a portion of the tax from suppliers' invoice
 - Seller: charge a portion of the tax on clients' invoice
- Nov 2016 reform: a substantial # of firms appointed as CAs
 - Rule: firms with 2015 annual sales > AR\$ 60M (\approx p97)
 - More tax collected at source by CAs in lieu of direct payments



Firm size distribution



Notes: Gross income bins of size 100K and 1M AR\$ (\sim 8K and \sim 80K \$), respectively; "Cutoff" indicates the location of income threshold; Dashed lines indicate p50, p95, p97, p99, respectively; Showing relevant part of support in each plot.



Empirical strategy

$$y_{it} = \sum_{\tau=-q}^{-1} \delta_{\tau} \cdot D_{i\tau} + \sum_{\tau=0}^{m} \beta_{\tau} \cdot D_{i\tau} + \theta_{i} + \gamma_{t} + \varepsilon_{it}$$

- *i* indexes firms and *t* calendar-quarters
- $D_{i\tau}$: event-study indicator for each quarter relative to the baseline period
 - Baseline period: Nov16-Jan17
- θ_i firm FE, γ_t calendar-quarter FE
- SE clustered by firm
- Balanced panel of firms

Conceptual framework

Tax collection mechanisms

Direct payment

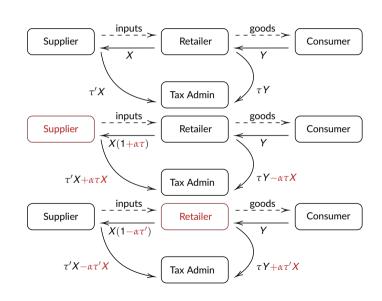
- $\tau' X$, τY self-reported

Withholding (Seller)

- Supplier now charges $X(1 + \alpha \tau)$ with $\alpha \in (0, 1)$
- Remits $\alpha \tau X$ to TA
- Retailer only owes $\tau Y \alpha \tau X$

Withholding (Buyer)

- Retailer now pays $X(1 \alpha \tau')$ with $\alpha \in (0, 1)$
- Remits $\alpha \tau' X$ to TA
- Supplier only owes $\tau' X \alpha \tau' X$



Conceptual framework

Tax collection mechanisms 4

Withholding through CAs implies 2 main changes on tax payments

- WHEN: tax filing date (end of the month) vs in advance (at source)
- WHO: direct payment vs withheld amount remitted by 3rd party

Implications

- For CAs:
 - Administrative burden
 - "Cash-flow benefit"
 - Scrutiny from govt (enforcement perceptions)
- For linked firms:
 - Third-party information reporting (enforcement perceptions)
 - Withheld amt \rightarrow lower-bound on self-reported sales & tax owed
 - Might distort the choice of trade partners towards non CAs

Transactions with CAs

 If taxpayers chose to substitute away from CAs we would expect the number or volume of their transactions to decrease in time

