

Discussion of
“Effects of a Mandatory Local Currency Pricing Law
on the Exchange Rate Pass-Through”

by Castellares and Toma

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Summary

- **This paper:** empirical analysis of effects of Law 28300 on ERPT in Peru

Law 28300: It is the obligation of suppliers to specify in their price lists or in their labels, signs, or containers or other places in which the price of the goods and services they offer is displayed, the total price of the good or service in Nuevos soles.

- Estimation of degree of ERPT on categories of CPI
 1. identify categories of goods with prices in USD
 2. data on 55 price indices from 1995-2018, “diff-in-diff” estimation of ERPT

$$\begin{aligned}\Delta p_{it} = & \sum_j \beta_j \Delta ner_{t-j} + \sum_j \zeta_{ij} D_i^{USD} \Delta ner_{t-j} + \sum_j \eta_j D_{t-j}^{law} \Delta ner_{t-j} \\ & + \sum_j \theta_{ij} D_i^{USD} D_{t-j}^{law} \Delta ner_{t-j} + \dots\end{aligned}$$

- Main result: ERPT declines after 2004 for goods with dollarized prices

Outline

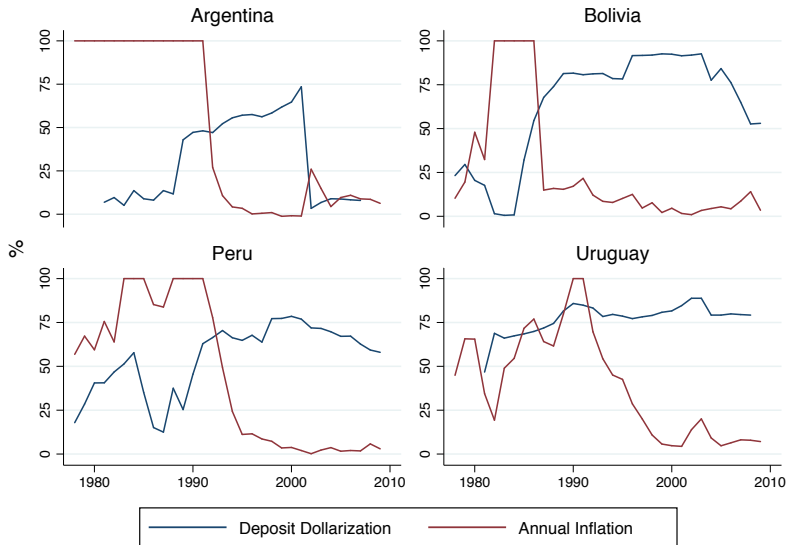
- ▶ Why do we need a law to avoid price dollarization?
- ▶ Identification
- ▶ Interpreting the results
- ▶ Final comments

Motivation: Why do we need a law to avoid dollarization?

- ▶ Financial and price dollarization are **persistent**

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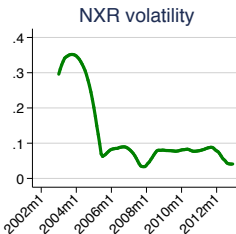
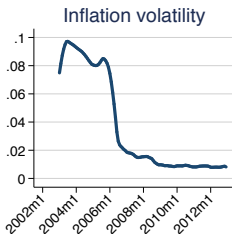
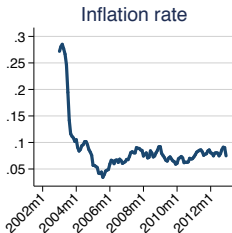
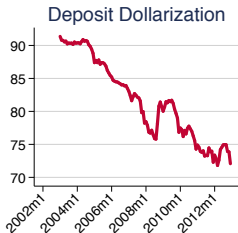
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Dollarization in Uruguay



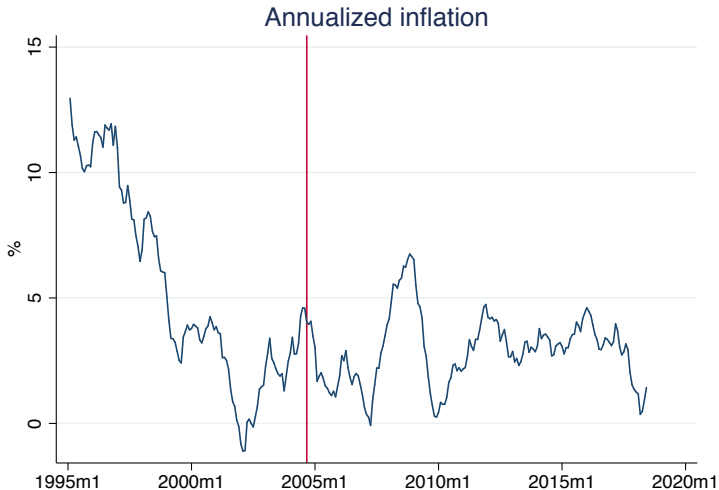
Motivation: Why do we need a law to avoid dollarization?

- ▶ Different roles of money exhibit **hysteresis**
 - ▶ means of payment: multiple equilibria with multiple currencies (Kiyotaki and Wright, 1993 - Uribe, 1997)
 - ▶ unit of account: optimal to set contracts in foreign currency even in “stable” economies (Doepke and Schneider, 2018 - Drenik, Kirpalani and Perez, 2018)
- ▶ Law 28300: (forceful) coordinating device to select equilibrium with local currency pricing

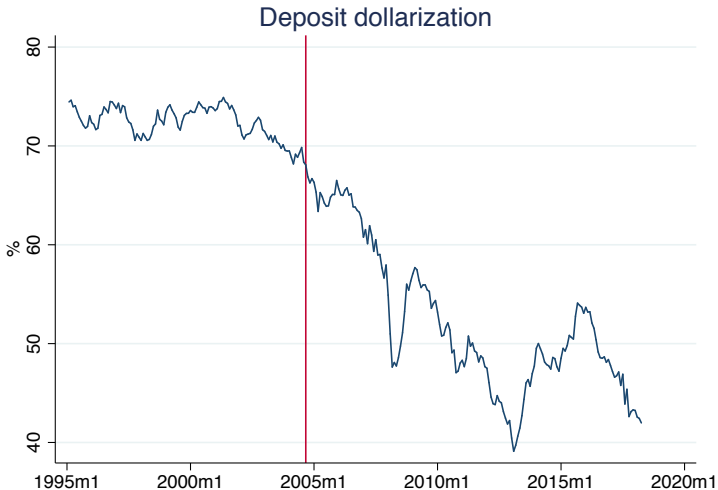
Identification: getting the timing right

- ▶ Goal: estimate the **causal** effect of Law on ERPT
- ▶ Similar approach to “diff-in-diff” estimation
 - ▶ necessary condition: implementation of the law was an “isolated” event
 - ▶ unlikely to be fully satisfied in a macro context: implementation of IT, **financial de-dollarization**

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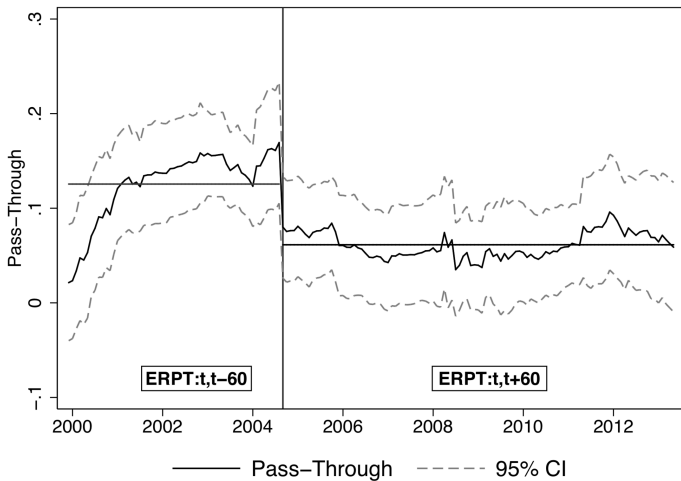
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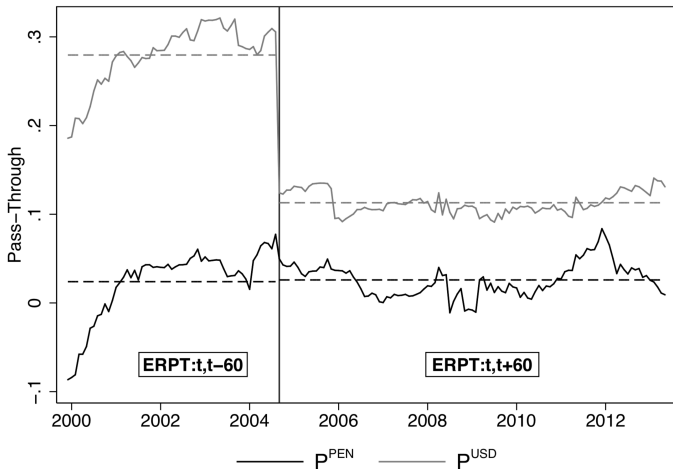
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- ▶ Further robustness analysis:
 - ▶ vary timing of law “enactment” to obtain counterfactual distribution of estimates - is the baseline estimated effect an outlier in the distribution?
 - ▶ 2-state Markov-switching regression (Hamilton, 1989)

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$$\Delta p_{it} = \sum_j \beta_j(s_t) \Delta ner_{t-j} + \sum_j \zeta_{ij}(s_t) D_i^{USD} \Delta ner_{t-j} \text{ and } s_t \sim \text{Markov process}$$

Does estimated change in regime occur around the end of 2004?

Interpreting the results

- ▶ Simple partial equilibrium framework

$$\text{Demand: } q_{it} = q(p_{it} - p_t) + q_t$$

$$\text{Supply: } p_{it} = e_t + p_{it}^* = e_t + \mu_{it} + mc_{it}$$

- ▶ ERPT depends on elasticity of cost to e_t and mark-up elasticity to relative price

Interpreting the results

	$h = 5$	$h = 7$
$share_i^{m,h} \times \Delta ner_t$	-0.002	-0.003
$share_i^{m,h} \times \Delta ner_{t-1}$	-0.001	0.003
$D_t^{law} \times share_i^{m,h} \times \Delta ner_t$	0.001	0.002
$D_{t-1}^{law} \times share_i^{m,h} \times \Delta ner_{t-1}$	0.002	-0.002
$D_{it}^{USD} \times share_i^{m,h} \times \Delta ner_t$	0.009***	0.008***
$D_{it}^{USD} \times share_i^{m,h} \times \Delta ner_{t-1}$	0.000	-0.001
$D_t^{law} \times D_{it}^{USD} \times share_i^{m,h} \times \Delta ner_t$	-0.006*	-0.004*
$D_{t-1}^{law} \times D_{it}^{USD} \times share_i^{m,h} \times \Delta ner_{t-1}$	0.000	0.001
N	7,074	9,643
R^2	0.023	0.018

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

- ▶ Firms are willing to pass increases in costs for goods priced in dollars only
 - ▶ durables: imported and technology intensive
 - ▶ services: aimed at high income consumers

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- ▶ ERPT depends on elasticity of cost to e_t and mark-up elasticity to relative price
- ▶ Alternative 1: $\frac{\partial q(p_{it}-p_t)}{\partial (p_{it}-p_t)}$ depends on the degree of financial dollarization
 - ▶ under flexible prices, lower dollarization of HHs savings refrains firms from increasing prices due to devaluation
- ▶ Alternative 2: prices are sticky (plausible in such context of low inflation/volatility)
 - ▶ extend number of lags to allow for more prices changes in the index

Final comments

- ▶ Very exciting paper!
- ▶ Evidence of price dollarization is scarce \Rightarrow further document the fact!
 - ▶ extended description of methodology
 - ▶ price dollarization over time
 - ▶ which goods are more dollarized? which households are more likely to buy them?
 - ▶ price dol. vs imported content: include goods with lower price dol.
 - ▶ which categories responsible for zero effect on services? housing?
- ▶ Further description of Peru's dollarization episode
 - ▶ firms' pricing behavior after 2004: prices denominated in LC or both?
 - ▶ link between unit of account and means of payment