

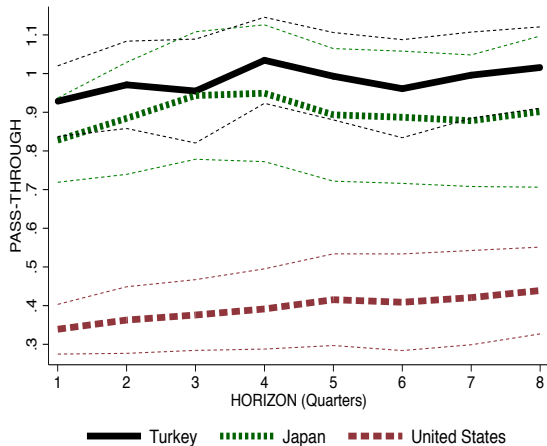
The International Price System

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- Inflation and Exchange Rates: Any systematic relation?
- The International Price System:
 - ① Dominance of dollar invoicing in world trade.
 - ② International prices, in their currency of invoicing, are not very sensitive to exchange rates at horizons of up to two years.
- Evidence for 35 developed and developing countries.
- Micro level evidence using U.S. import prices.

A Tale of Three Countries

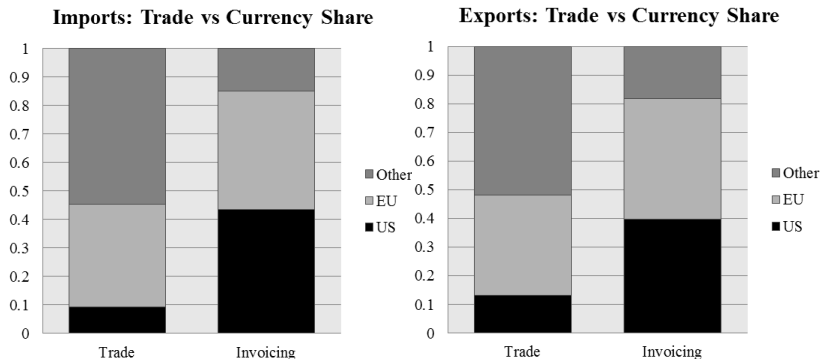


Import Prices	Turkey	Japan	US
One quarter	93%	83%	34%
Eight quarter	100%	90%	44%
Foreign Invoicing	97%	76%	3%

A Tale of Three Countries ... more generally true

- ① Other countries
- ② Using detailed import price data for the U.S.
 - Within countries
 - Within sectors as detailed as 10-digit HS codes
 - Conditional on a price change
 - Arms-length transactions

IPS Definition 1: Dominance of dollar invoicing in world trade



- Covers 55% of imports, 57% of exports. Averages post 1999.
- Dollar invoicing share: 4.7 times its share in world imports, 3.1 times its share in world exports.
- Euro invoicing share: 1.2 times for imports and exports.

IPS Definition 1a: Relative Stability of invoicing patterns over time

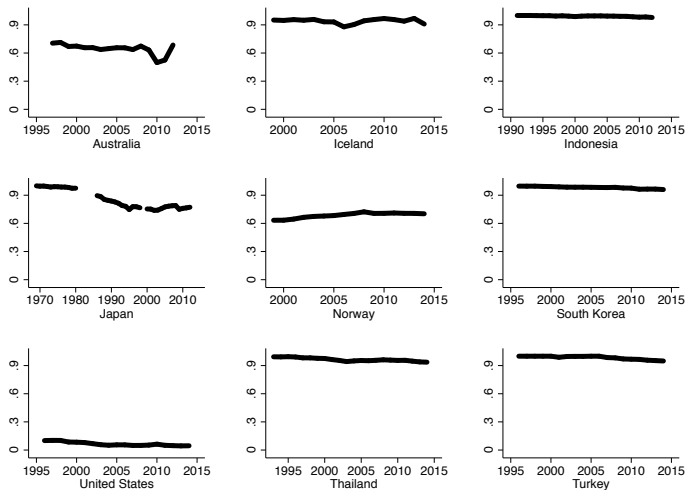
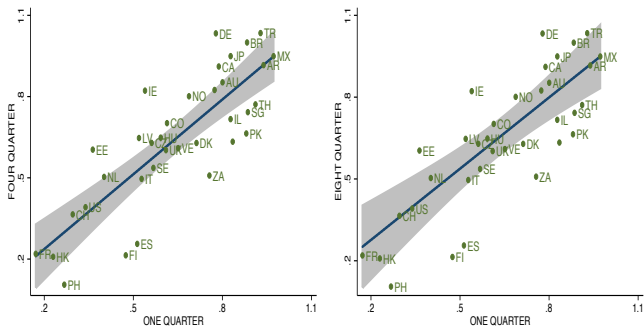


Figure: Fraction Priced in Foreign Currency

IPS Definition 2: International prices, in their currency of invoicing, are not very sensitive to exchange rates at horizons of up to two years.

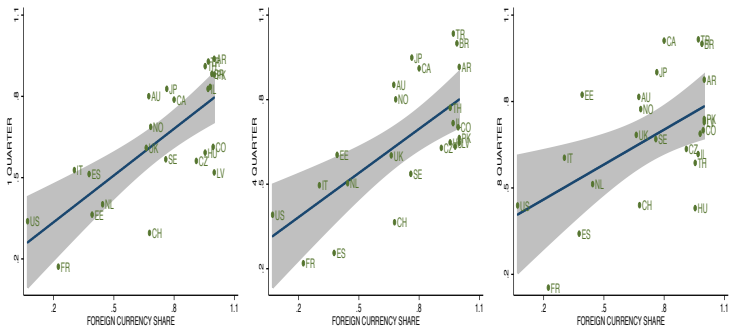
IPS Definition 2a: Countries with high short-run passthroughs have high long-run pass-through



- Dynamic Lag Regression: $\Delta ipi_{n,t} = \alpha_n + \sum_{k=0}^T \beta_{n,k} \Delta e_{n,t-k} + \gamma_n X_{n,t} + \varepsilon_{n,t}$

	Four Quarter	Eight Quarter
Slope	0.921	0.871
Intercept	0.053	0.102

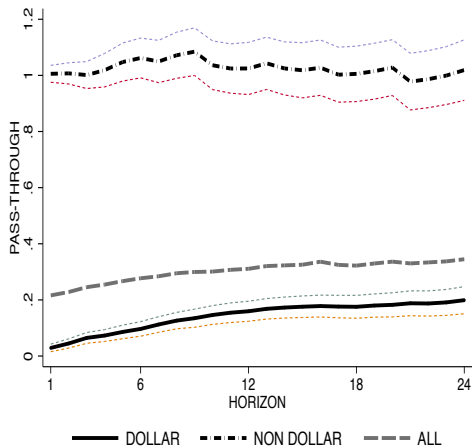
IPS Definition 2b: Countries with higher shares of imports invoiced in a foreign currency have higher short-run and long-run pass-through



FC share	One Quarter	Four Quarter	Eight Quarter
0%	23%	29%	39%
100%	78%	79%	78%

IPS Definition 2c: Border prices, in whatever currency they are set in, respond partially to exchange rate shocks even conditional on a price change

US BLS price surveys, 1994.M1-2014.M6, Gopinath, Itskhoki, Rigobon (2010)



	PT Conditional on Price Change	
	<i>D</i>	<i>ND</i>
All	0.26	0.85
Germany	0.32	0.85
Switz.	0.21	0.67
Italy	0.24	0.76
UK	0.23	0.77
France	0.19	0.72
Spain	0.21	0.76
Diff.	0.21	0.93
10 HS	0.27	0.88

IPS is well grounded in theory

- Consistent with optimal currency invoicing literature
- When prices are sticky, price in a currency in which 'desired' prices are most stable
 - If competitors price in dollars, then desire stable dollar prices, so as not to lose market share
 - If imported inputs priced in dollars, then marginal costs stable in dollars, desire stable dollar prices
- Dollar dominance is self-enforcing

① Inflation Stabilization:

- Following a 10% depreciation

	<i>Import Content</i>	<i>Inflation_{CPI}</i>
US	0.12	0.4 – 0.7
Japan	0.12	0.8 – 1.3
Mexico	0.15	1.38 – 1.59
Turkey	0.18	1.65 - 2.03

- Anticipated Fed rate \uparrow :
 - Unlikely major disinflationary concern for US.
 - More significant inflationary concerns for a country like Turkey.
- Asymmetric monetary policy spillovers

Policy Implications

- ② Export Competitiveness: quantities versus mark-ups
 - Do depreciations (appreciations) make exports cheaper (expensive)?
 - For the U.S., Yes
 - For most others, No: Mainly fluctuations in mark-ups (profits)
 - Japan: 33% of exports invoiced in yen.
 - PT into dollar prices even conditional on a price change for these goods is 23%

- ③ Internationalization of Currencies: chinese yuan
 - Added benefit of insulating domestic inflation from external shocks.

- ④ Special Drawing Rights: more symmetry
 - Bring greater symmetry in policy spillovers.
 - To be privately optimal, will need a large number of importers and exporters to price in SDRs.

United States '*Privileged Insularity*', as regards inflation, owing to its invoicing currency status in international goods markets.