Inflation: Some Insights from Trade

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- Channels
  1. Import price inflation
  2. Sensitivity to output gap
  3. Inflation expectations

$$\pi_t = \beta \pi_t^e + \lambda \left(U_t - U_t^* \right) + \delta_m \pi_t^m + \upsilon_t,$$

Channel #1: Import price inflation

$\pi_t = \beta \pi_t^e + \lambda \left(U_t - U_t^* \right) + \delta_m \pi_t^m + \upsilon_t,$

- Inflation at-the-dock
  - Currency of Invoicing and Exchange Rate Pass-through
  - Dollar dominance: invoicing share 4.7 times U.S. import share

Country	Imports	Exports
United States	0.93	0.97
Italy*	0.58	0.61
Germany*	0.55	0.62
Spain*	0.54	0.58
France*	0.45	0.50
United Kingdom	0.32	0.51
Australia	0.31	0.20
Switzerland	0.31	0.35
Norway	0.30	0.03
Sweden	0.24	0.39
Japan	0.23	0.39

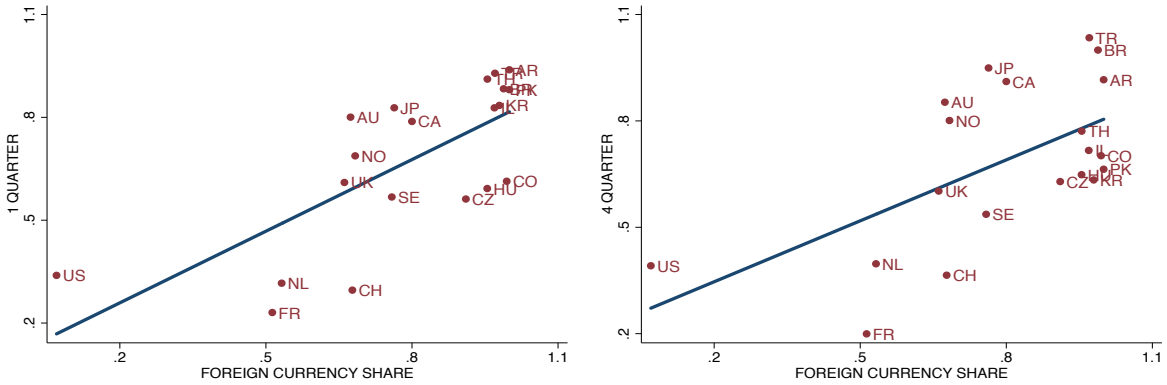
Country	Imports	Exports
Canada	0.20	0.23
Poland	0.06	0.04
Iceland	0.06	0.05
Thailand	0.04	0.07
Israel	0.03	0.00
Turkey	0.03	0.02
South Korea	0.02	0.01
Brazil	0.01	0.01
Indonesia	0.01	0.00
India	0.00	0.00

Table: Fraction invoiced in home currency

Channel #1: Import price inflation

$\pi_t = \beta \pi_t^e + \lambda (U_t - U_t^*) + \delta_m \pi_t^m + \upsilon_t$

- Higher foreign currency invoice share, higher pass-through at-the-dock



Channel #1: Import price inflation

$\pi_t = \pi_t^e + \lambda (U_{t-1} - U_{t-1}^*) + \delta_m \pi_{t-1}^m + \upsilon_t$

Table: Short-Run and Long-Run Pass-Through

	(A)		(B)	
	IPI: Nonpetroleum Imports			
	SRPT	LRPT	SRPT	LRPT
Estimate	0.325***	0.424***	0.258***	0.451***
se	(0.026)	(0.054)	(0.031)	(0.052)
	IPI: Consumer Goods Excluding Autos			
	SRPT	LRPT	SRPT	LRPT
Estimate	0.147***	0.241***	0.134***	0.249***
se	(0.019)	(0.034)	(0.027)	(0.040)
	IPI: Nondurable Consumer Goods			
	SRPT	LRPT	SRPT	LRPT
Estimate	0.129***	0.213***	0.080***	0.193***
se	(0.041)	(0.052)	(0.033)	(0.053)
Time range	1996:Q2–2014:Q4		1993:Q1–2014:Q4	

Dollar Dominance and Trade

- Import price inflation driven by dollar exchange rate (regardless of trading partners

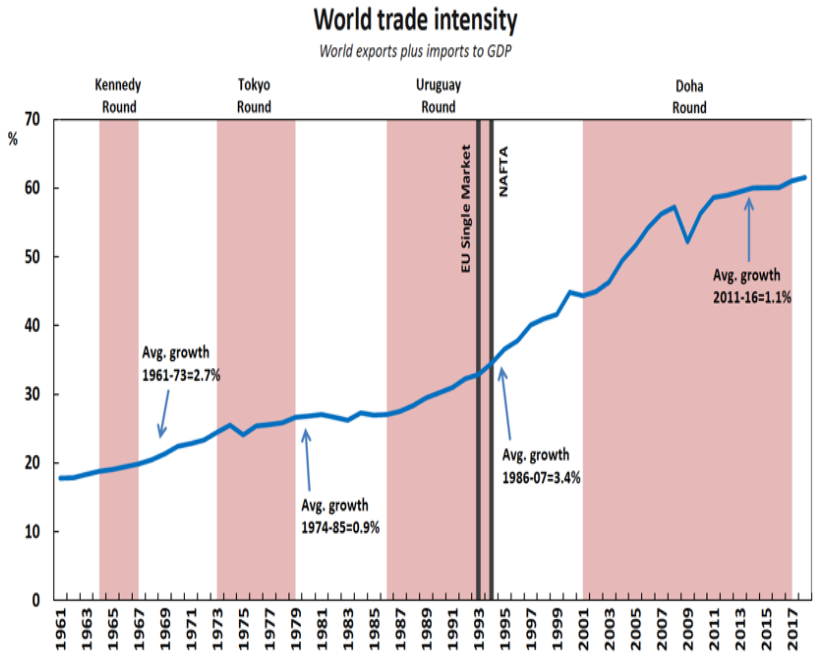
	$\Delta IPI_{ij,t}$	$\Delta IPI_{ij,t}$
$\Delta e_{ij,t}$	0.76	0.16
	(0.013)	(0.013)
$\Delta e_{\$j,t}$		0.78
		(0.014)
controls	PPI, Time FE	PPI, Time FE

- U.S. dollar drives global trade prices and volumes
- Weak response of exports
- Stronger dollar can negatively impact trade in rest-of-the-world
- TOT (non-commodities) disconnected from exchange rate

Channel #2: Sensitivity to output gap

$\pi_t = \beta \pi_t^e + \lambda (U_t - U_t^*) + \delta_m \pi_t^m + \upsilon_t$

- Greater competition raises mark-up elasticity, reduces λ
  - Reduces pass-through conditional on a price change
  - Reduces frequency of price change

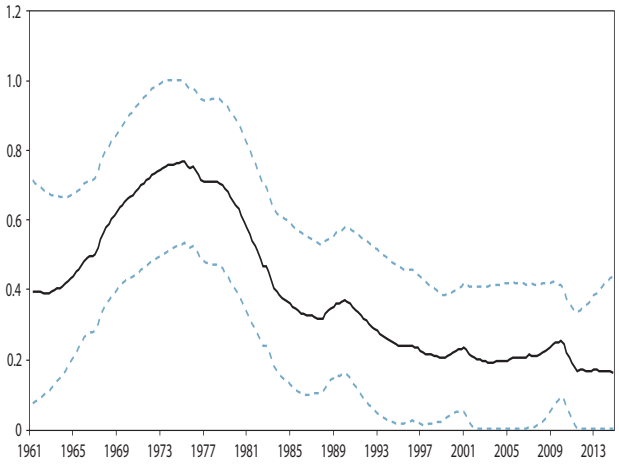


Channel #2: Sensitivity to output gap

$\pi_t = \beta\pi_t^e + \lambda(U_t - U_t^*) + \delta_m\pi_t^m + \upsilon_t$

- Blanchard (2015, US Phillips Curve: Back to the 60s?)

Figure 3 The decrease in the slope of the Phillips curve (θ)



Note: Dotted blue lines show +/–1 standard deviation.

Source: Blanchard, Cerutti, and Summers (2015).

- Improved central bank credibility: anchoring of inflation expectations
- Low trend inflation, low frequency of price change

Channel #3: Inflation Expectations

$\pi_t = \beta\pi_t^e + \lambda(U_t - U_t^*) + \delta_m\pi_t^m + \upsilon_t$

- Real interest rates
- Depends on world supply and demand shocks
  - productivity growth
  - demographics
  - savings glut/ safe asset demand
- Negative real rates $\rightarrow$ zero lower bound $\rightarrow$ inflation expectations (credibility)
- Inflation versus financial bubbles