

Discussion of “Importers, Exporters, and Exchange Rate Disconnect” by Mary Amiti, Oleg Itskhoki, and Jozef Konings

Dallas Fed and Swiss National Bank Conference

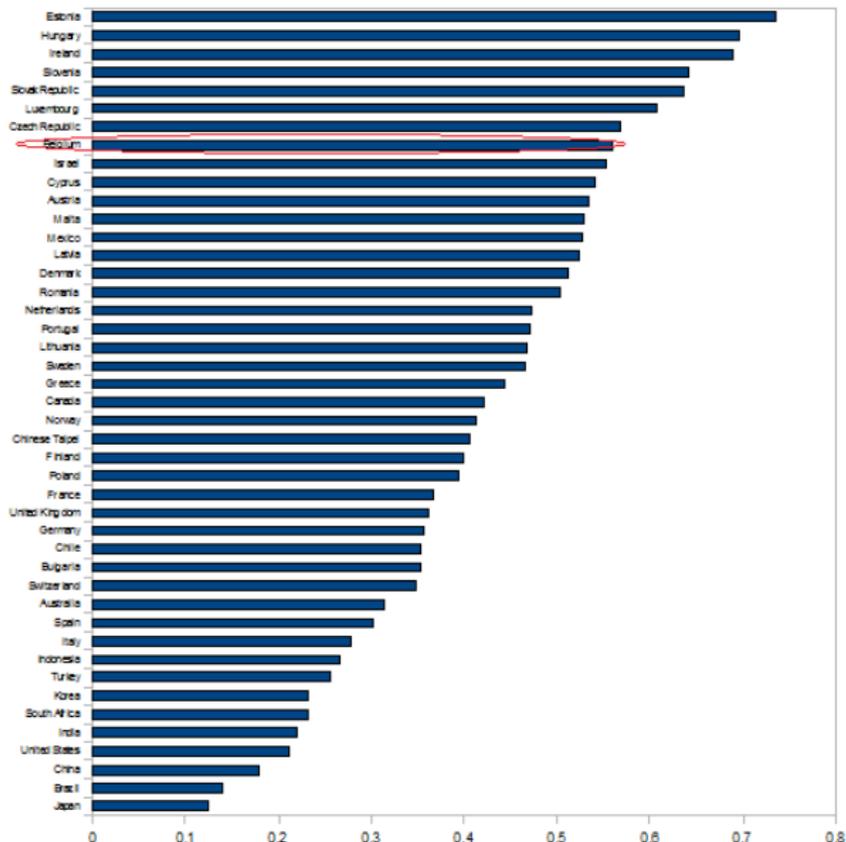
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May 31, 2013

- Link firm data to imports by source and exports by destination
→ share of imported inputs affects exchange rate pass-through to export prices
- Combine models of oligopolistic competition (Atkeson and Burstein (2008)) and endogenous choice of imported intermediate inputs (Halpern, Koren and Szeidl (2011))
- Theory and data imply high market share exporters also have higher share of imported inputs → both channels contribute equally to lower pass-through for large exporters
- Dominance of large exporters can explain low aggregate pass-through

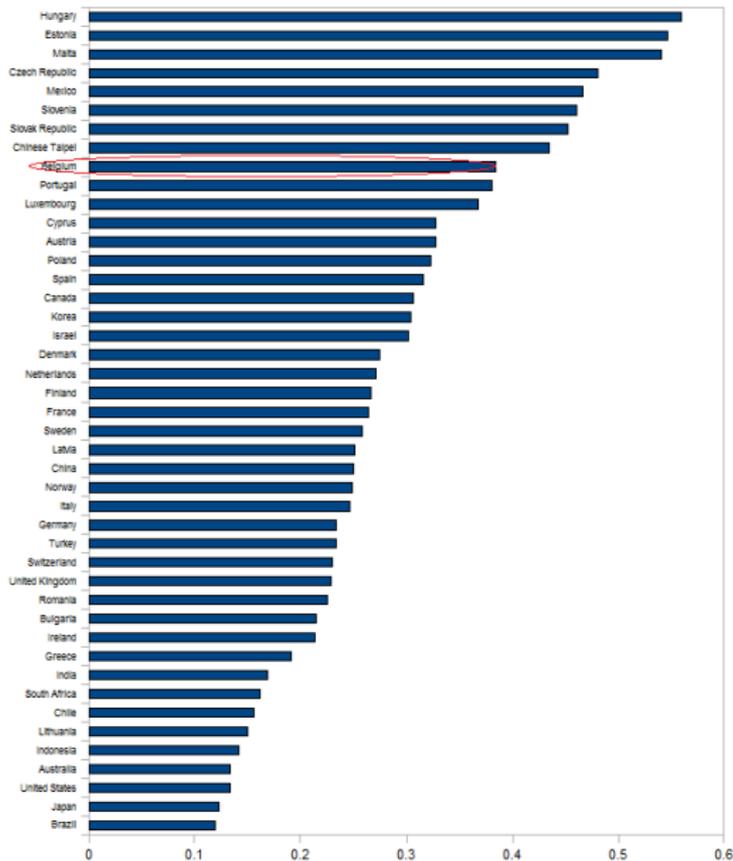
Imported Intermediate Share of Manufactures

OECD IO Tables



Manufactured import share of manufacturing exports

OECD IO Tables



- Oligopoly pricing: $p_i = \frac{\sigma_i(S_i)}{\sigma_i(S_i)-1} MC_i$ (MC_i in foreign currency)
- Pass-through of common cost-shifter ϵ : $\frac{\partial p}{\partial \epsilon} \frac{\epsilon}{p} = \frac{1}{1+\Gamma(S_i)} \underbrace{\frac{\partial MC_i}{\partial \epsilon} \frac{\epsilon}{MC_i}}_{\nu_i}$
- Cost-shifter could be exchange rate, input/commodity price, wage rate, tax, etc.
- $\Gamma(S_i)$ related to markup elasticity, rising in S_i for Atkeson and Burstein (2008) so high $S_i \rightarrow$ low pass-through of MC
- ν_i : MC sensitivity to cost-shifter could vary with firm size/market share (S_i)
 - Composition of inputs: imports, wages, materials, intangible/hard to measure marginal costs (distribution, marketing, inventories, capital)
 - Input sourcing: monopsony power, direct purchase from manufacturer vs. through wholesaler/distributor or retailer, long-term contracts

General insight: $cov(S_i, \nu_i) \neq 0$ confounds inference on market power and pass-through

Big exporters and importers

- Euro depreciation raises MC denominated in foreign currency and hence price
- MC sensitivity is lower when ρ_f , the share of imported intermediate inputs, is higher
- Source matters: Euro-zone imports close to domestic inputs with respect to ϵ , destination country inputs unaffected by ϵ (ideal hedge), other countries intermediate

Specific insight: $cov(S_f, \rho_f) > 0$ when imported inputs have cost-advantage (CES) but importer fixed cost per variety (Halpern, Koren and Szeidl (2011)).

Two channels reinforce each other to lower exchange-rate pass-through for large firms.

- Production Cobb-Douglas in materials and labor:

$$Y_i = \Omega_i X_i^\phi L_i^{1-\phi}$$

- Materials Cobb-Douglas in input types:

$$X_i = \exp \left\{ \int_0^1 \gamma_j \ln X_{i,j} dj \right\}$$

- Types CES in foreign and domestic varieties

$$X_{i,j} = \left(Z_{i,j}^{\zeta/(1+\zeta)} + a_j^{1/(1+\zeta)} M_{i,j}^{\zeta/(1+\zeta)} \right)^{(1+\zeta)/\zeta}$$

Materials share of variable costs (ϕ) should be constant across firms in a (HS4) sector, but ρ_f (imported share of variable costs) varies by firm

Table: Table 2 in shares

	Exporter		Non-exporter
	High ρ_f	Low ρ_f	
Wages	0.113	0.144	0.194
Total materials	0.887	0.856	0.806
Domestic materials	0.463	0.650	
Non-Euro imp. materials	0.179	0.015	
Euro-zone imp. materials	0.245	0.191	

Imported Input Shares

Interpretation:

- Consistent with elasticity of materials/labor > 1 (small firms with higher material cost use more labor) or non-homothetic production technology
- Table 4: material cost strongest correlate of non-Euro import intensity in firm cross-section
- Materials share must vary a lot by sector; does it vary within sector like ρ_f ? (cannot tell from Tables 2 and 4)

Why this might matter:

- Domestic wage (in foreign currency) most sensitive to exchange rate shock; energy, raw materials, manufactured inputs (both imported and domestic) may be less responsive
- Robustness Table 7 (“Euro import intensity” placebo) and Table 8 (control for interaction of employment or TFP with exchange rate) help
- Is ρ_f the main factor driving this lower sensitivity of marginal costs or is it material costs? Could this explain why ρ_f remains significant even when including Δmc and S in Table 5?

Suggestion: include interaction with firm materials share as control (for 75% sub-sample where this is reported)

Wholesale and vertical structure

- Main difference between high and low ρ_i firms is “domestic” materials vs. “non-Euro” materials (not “Euro” imported materials)
- Not in the model, but consistent with higher importer fixed costs for non-Euro imports than Euro imports

Wholesale importers: a way around importer fixed costs?

- Wholesale firms: 40% of exporter observations (dropped from main analysis)
- Authors discuss measurement error in ρ_f and consequent attenuation bias
- Convert Euro but especially non-Euro imports to “domestic” materials, cover fixed costs but add markups and other (marginal?) costs

Interpretation: is non-Euro import share effect really about vertical structure and “mode of importation”?

- **Quantitative importance: assess using these data or domestic production data**
- Model: market structure on import/input side (wholesaler=fixed import cost plus markup?)

Market structure on import/input side

Two channels of ρ_f are:

- ① Sensitivity of import prices to exchange rate (import pass-through)
- ② Correlation of export destination and import source exchange rates

Paper does this at the country level. Can do better?

- **Estimate pass-through into imported input prices *by firm* to get at monopsony power and long-term contracts**
- Firm variation in *level* of input prices for similar items might help with interpretation (“importer fixed cost” in the model = “quantity discount”?)

While average pass-through is quite high (80%)

- Bilateral exchange-rates plus sector-destination FE plus time FE give $R^2 = 0.057$
- Adding ρ_f , $S_{f,s,k,t}$ and $\Delta mc_{f,t}$ raises this to $R^2 = 0.062$
- Much more variation explained by sector-destination-time ($R^2 = 0.344$) or firm-product-year plus destination ($R^2 = 0.487$) FE

General finding in literature: market structure variables only explain small fraction of variation in product/firm pass-through

- How much of pass-through variation is explained by ρ and S within vs. across sectors?
- **Allow pass-through to vary by sector, so only variation in ρ_f *within* sector drives differential pass-through**
- **Disaggregate by sector: heterogeneity in effect of ρ and S ?**

- Is ρ_i a sufficient statistic? Do different margins of ρ_i matter (decomposition by number of types, number of countries per type, quantity per country per type)?
- What do the value cutoffs (for firms? import/export transactions?) do in terms of measurement error?
- Can use product and firm destination-sector-period market shares? Does destination market share matter controlling for firm (total export) market share (e.g. independent variation across markets)?
- Do intra-firm imports play any role in exchange-rate sensitivity?