Euro area external imbalances and the burden of adjustment[1] [2]

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[1] *Journal of International Money and Finance* (2014), vol. 48, 336-356.
[2] The views expressed in this presentation are those of the author and do not necessarily represent those of the Banque de France or of the Eurosystem.

External imbalances and the transfer problem

- What are the consequences of an adjustment of external imbalances on real exchange rates ?
- The mechanisms of external adjustment :
  - Obstfeld and Rogoff (2001, 2005, 2007) on global imbalances
- Ohlin's income effect :
  - the CA rebalancing implies a transfer of resources from the Debtor country towards the Surplus country. This transfer lowers the income of Debtor country, decreasing their demand for foreign goods, thus imports
- Keynes's terms-of-trade effect :
  - the "secondary burden" of the CA rebalancing is the change in relative prices and the deterioration of the terms-of-trade of the Debtor country

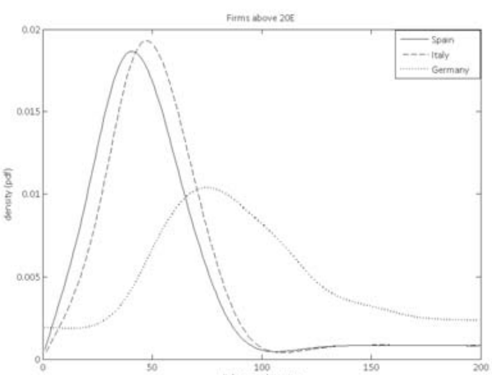
International trade and Open Macroeconomics

- Evidence from theoretical and empirical trade literature on the role of the extensive margin:
  - exporters are large and highly productive firms
  - a large fraction of the growth in trade flows is due to the extensive margin
- Question: what are the consequences of an active extensive margin of trade on macroeconomic adjustment ?
  - Dekle, Eaton and Kortum (2008)
  - Pappadà (2011)
  - Corsetti, Martin and Pesenti (2013)
- Potential dampening effect on real exchange rate movements

This paper

- The objective of this paper is to explore the consequences of an adjustment of Euro area external imbalances on changes in relative prices
- Exploit ECB *CompNet* data to assess the cross-country differences in the productivity distribution within the Euro Area

Heterogeneous productivity distributions



Source: ECB *CompNet*. Productivity is the average over the period 2002-2010.

The model

A three-country general equilibrium model with a tradable and a non-tradable sectors. In both sectors, firms are heterogeneous in terms of productivity.

Denote Euro Area deficit country by D, surplus country by S, and rest of the world by R.

Three bilateral exchange rates :

$$\varepsilon_{D,S} = \frac{w_S}{w_D} \qquad \varepsilon_{D,R} = \frac{w_R}{w_D} \qquad \varepsilon_{S,R} = \frac{w_R}{w_S}$$

The exchange rate $\varepsilon_{D,S}$ is defined as units of Deficit labor per unit of Surplus labor. An upward (downward) change in $\varepsilon_{D,S}$ therefore refers to a depreciation (appreciation) of Deficit labor vs. Surplus labor.

The model

Equilibrium :

The zero-profit conditions and the aggregate budget constraint in each country i jointly determine :

- the equilibrium productivity thresholds $\overline{x}_{i,i}$, $\overline{x}_{i,N}$, $\overline{x}_{i,j}$ $\forall j \neq i$
- the bilateral exchange rates $\varepsilon_{D,S}$, $\varepsilon_{D,R}$ and $\varepsilon_{S,R}$

Numerical simulations :

1. benchmark : external accounts rebalancing
2. counterfactual : mean-preserving contraction of the productivity distribution of each country

Main results

External account rebalancing, 2007–2013

	Spain		Italy	
	$RER_{ES/DE}$	$RER_{ES/ROW}$	$RER_{IT/DE}$	$RER_{IT/ROW}$
Counterfactual	1.26	1.53	0.53	0.44
Benchmark	3.63	3.79	1.38	0.87
Higher elasticity of substitution for deficit countries	5.98	3.28	2.45	0.73

Notes: Percentage changes in real exchange rates. A positive number refers to real exchange rate depreciation. The external rebalancing refers to the actual rebalancing between 2007 and 2013 within-euro area (column 2 for Spain and column 4 for Italy) and extra-euro area (column 3 for Spain and column 5 for Italy).

- The extensive margin of trade plays a limited role for the external adjustment of EA deficit countries (Italy, Spain)
- A model which neglects the cross-country differences in firm productivity distribution underestimates the exchange rate movements associated with the external adjustment