

# Euro area external imbalances and the burden of adjustment<sup>1 2</sup>

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<sup>2</sup> 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.

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## 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

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## 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

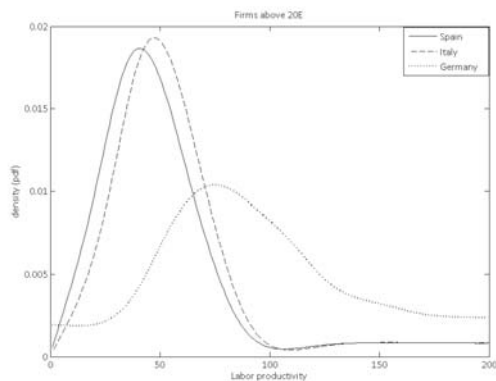
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## This paper

- ▶ 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

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## Heterogeneous productivity distributions



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

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## 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 :

$$\varepsilon_{D,S} = \frac{W_S}{W_D} \quad \varepsilon_{D,R} = \frac{W_R}{W_D} \quad \varepsilon_{S,R} = \frac{W_R}{W_S}$$

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.

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## The model

### Equilibrium :

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

- ▶ the equilibrium productivity thresholds  $\bar{x}_{i,i}, \bar{x}_{i,N}, \bar{x}_{i,j} \forall j \neq i$
- ▶ 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

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## Main results

External account rebalancing, 2007-2013

	Spain		Italy	
	RER <sub>ES/DE</sub>	RER <sub>ES/ROW</sub>	RER <sub>IT/DE</sub>	RER <sub>IT/ROW</sub>
<b>Counterfactual</b>	1.26	1.53	0.53	0.44
<b>Benchmark</b>	3.63	3.79	1.38	0.87
<b>Higher elasticity of substitution for deficit countries</b>	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

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