Introductory remarks

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"Enhancing competitiveness and fostering sustainable growth: methodological issues and empirical results"

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CompNet The Competitiveness Research Network

***Disclaimer**: the opinions expressed in this presentation are those of the author and do not necessarily reflect the views of the European system of Central Banks.*

Welcome!

Outline

1. **CompNet** project: **motivation** and **inspiration**

2. Main **research** and **policy contributions**

3. Our **plans** for the **future**

Policy motivation

Why is competitiveness analysis important, also for a Central Bank?

- Trade liberalisation and - globalisation in general - increase **international competitive pressures**
- Within the euro area, competiveness asymmetries are at the **bulk of the crisis**
- Need to assess competitiveness issues in order to identify the appropriate **structural reforms**, i.e. those that "[…] *lift the path of **potential output**, either by raising the inputs to production or by ensuring that those inputs are used more **efficiently***" and "*make economies more **resilient** to economic shocks by facilitating price and wage flexibility and the swift **reallocation** of resources within and across sectors*"

M. Draghi, Sintra - May 2015

*What is **competitiveness**?*

- *"A competitive economy, in essence, is one in which **institutional** and **macroeconomic** conditions allow **productive firms** to thrive. In turn, the development of these firms supports the expansion of employment, investment and trade. "*

  M. Draghi, Paris - November 2012

- *" In the global economy the euro area **cannot compete on costs alone** with emerging countries. Our comparative advantage has to come from **combining cost competitiveness** with **specialisation in high-value added activities**."*

  M. Draghi, Jackson Hole - August 2014

CompNet goals

- The EU system of Central Banks set up the Competitiveness Research Network (**CompNet**) in March 2012

CompNet The Competitiveness Research Network

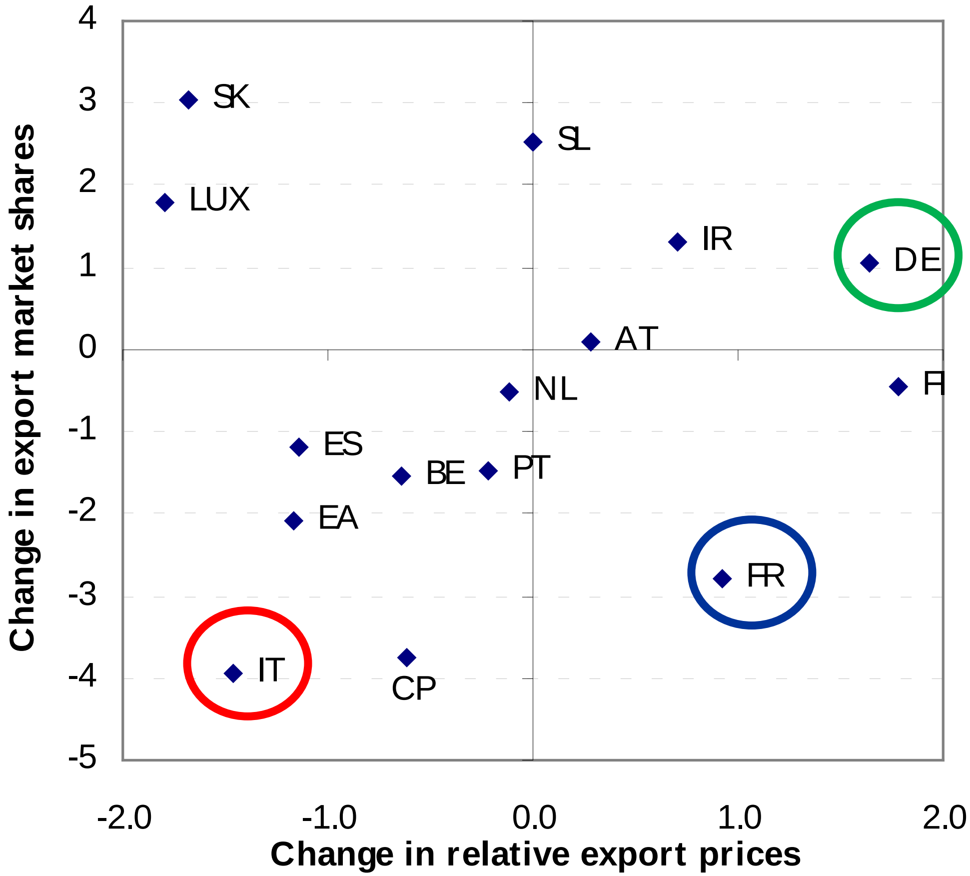
1. Provide a robust theoretical and empirical link between the drivers of competitiveness and macroeconomic performance for **research** and **policy analysis**

2. Using cross-country benchmarking and adopting a **multi-dimensional** approach (i.e. a set of complementary macro, firm-level and cross-border indicators)

- Traditional macroeconomic **price/cost** indicators alone are **unable** to provide a comprehensive explanation of trade developments.

Price competitiveness and export market shares

Average annual percentage changes, Pre-crisis (1999-2008Q3)



Source: ECB calculations.
Note: Price competitiveness is proxied by relative export prices (competitors over domestic prices). **A positive value corresponds to a gain in price competitiveness.**

Pre-crisis export performance in **Germany** and **Italy** is positively correlated with changes in price competitiveness (gain for Germany, losses for Italy).

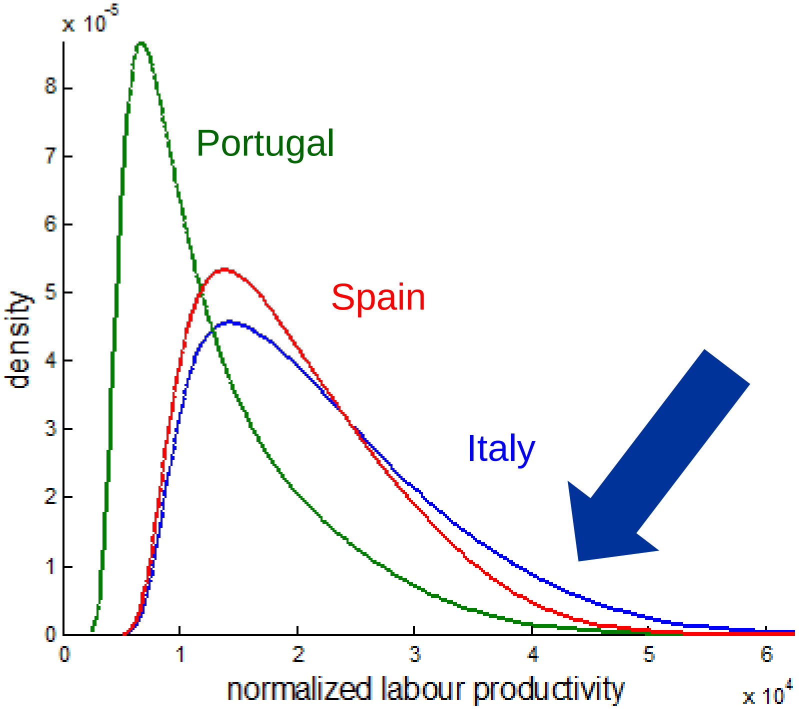
This is not the case for **France** (which lost export shares though it gained price competitiveness).

Other factors must have been at **play**

The rational of firm-level perspective

- Firm performance distribution is **very disperse** and **asymmetric**
- Rather than most firms around an "average" performance, there are lots of firms which have low productivity and **only** a **few** which are **very productive** in the "**right-tail**" of the distribution
- …the so called "*happy few*"

Normalized labor productivity distribution
Manufacturing sector
firms with 20+ employees - Average over 2006-2012



Policies should aim at making the "**right-tail**" even **thicker**

Impact of a macro **shock** or **policy depends** on the shape of the **underlying distribution**

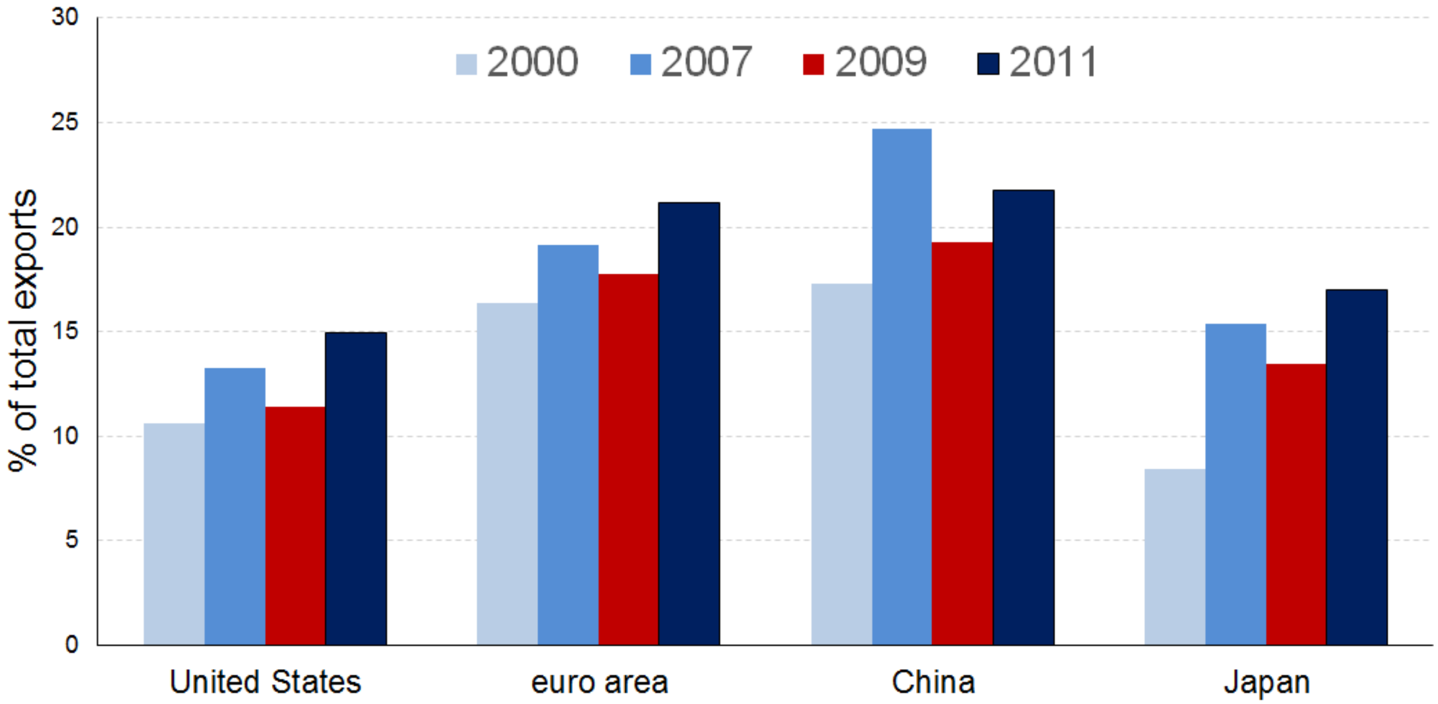
The Global Value Chain (GVC) dimension

- **Production** of most goods and services around the world is **vertically fragmented along GVCs**…

- Exports incorporates a **large foreign value added** component

The Global Value Chain (GVC) dimension

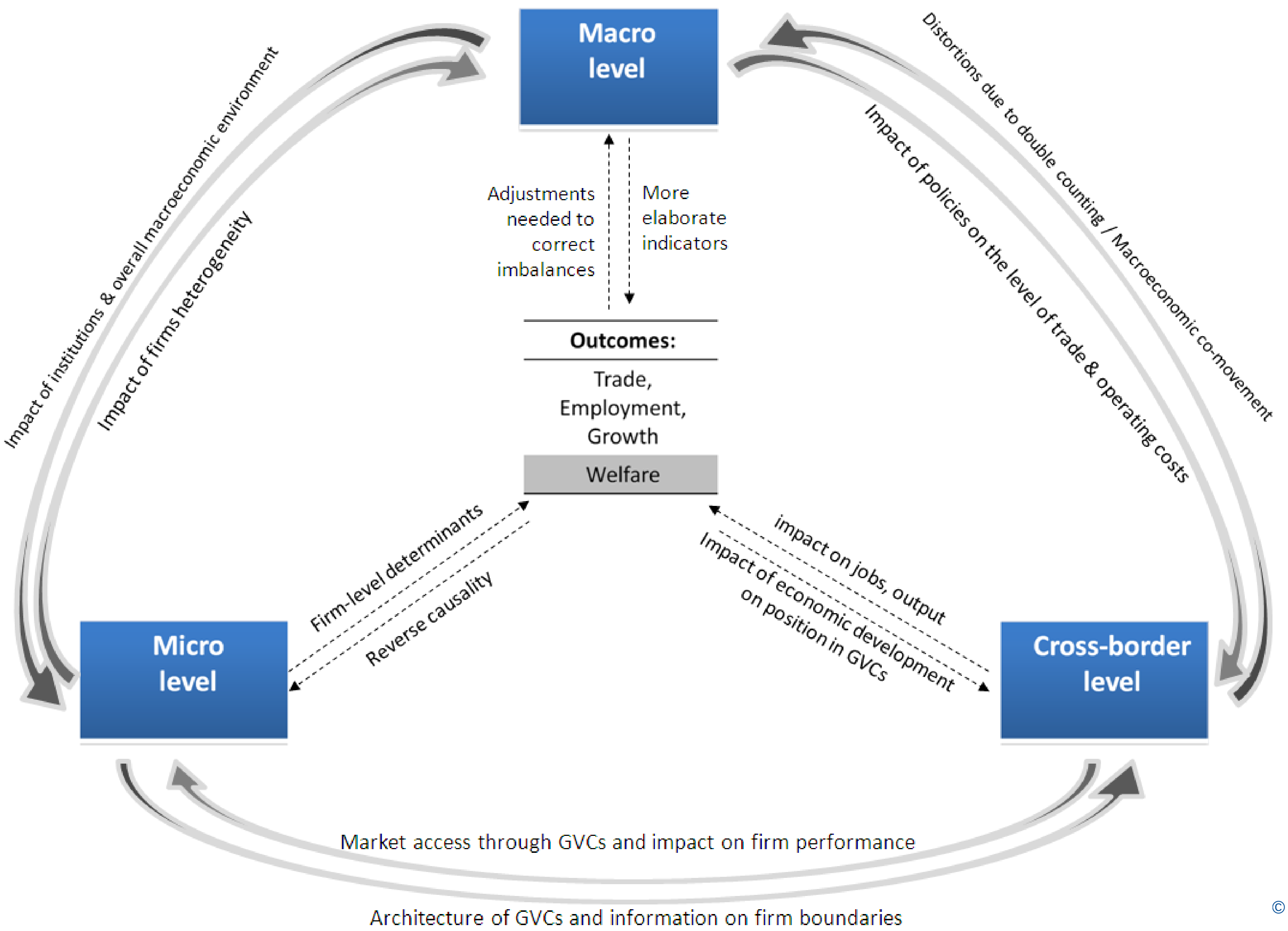
- **…which is** **increasing** in all major economies, as share of total exports



Source: Amador et al. (2015).
Note: The euro area is taken as a whole (i.e. intra-euro area trade flows are disregarded).

Traditional trade indicators must be **complemented** with **value-added** based measures

CompNet approach: merging these three dimensions



Main research and policy contributions

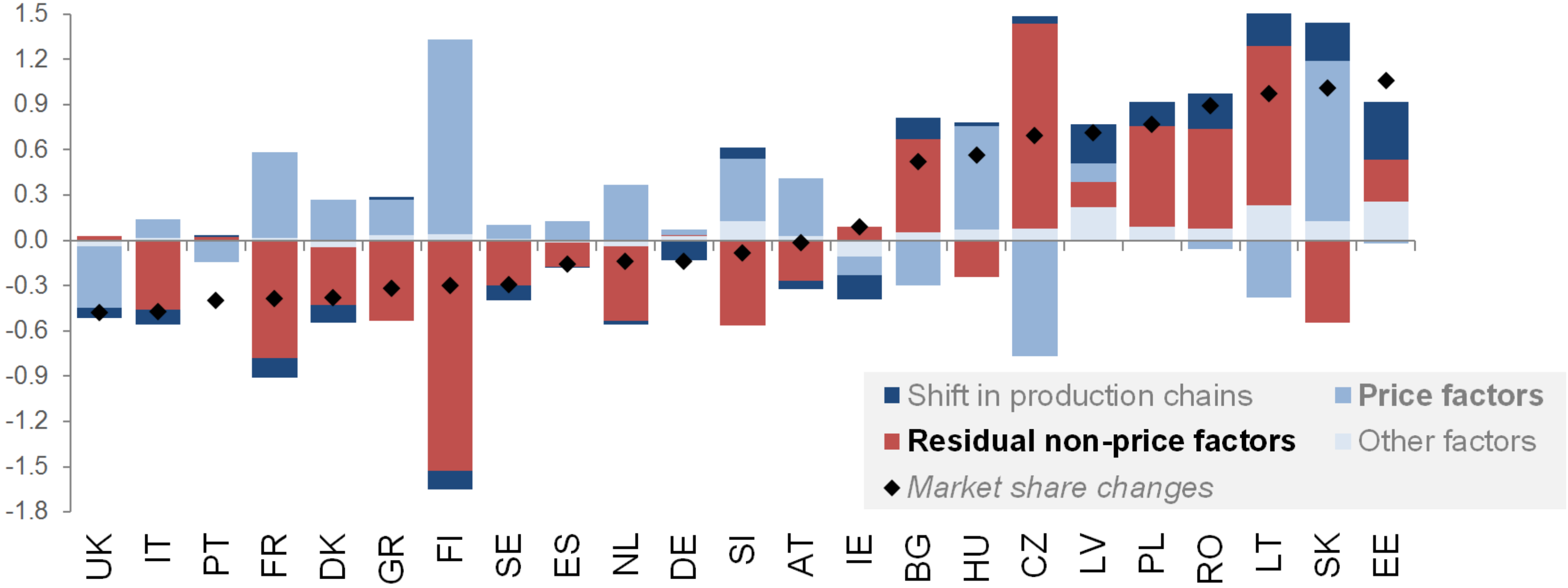
- The **interaction** of these three **workstreams** delivered substantial research results and related policy implications

- The **Report** "*Assessing European competitiveness: the contribution of CompNet research*" that we are presenting today for the first time collects our most important contributions, following these main venues:

  1. **Trade** and **Competitiveness**
  2. **Shock transmission** in a **global context**
  3. **Productivity** and **reallocation**

- We will present a few highlights…

- As seen by the decomposition of change in value-added export market share

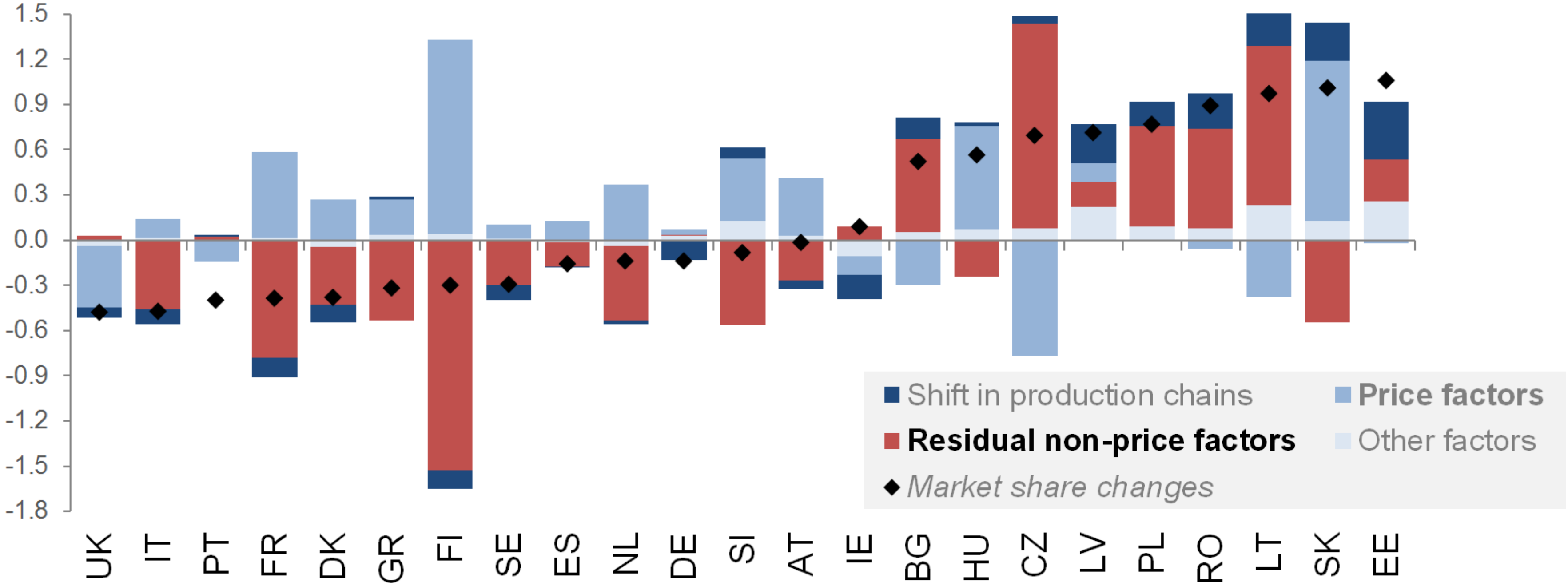


Notes: 1996-2011 period
Sources: Benkovskis, K. and Wörz, J. (2015)

CompNet papers focused on a number of **non-price factors** such as:

i) **quality** and consumer **taste**
ii) the extent of the **globalisation** of **production** processes
iii) **domestic conditions** faced by exporters
iv) the role of the **geographical** and product structure of exports

- As seen by the decomposition of change in value-added export market share



Notes: 1996-2011 period
Sources: Benkovskis, K. and Wörz, J. (2015)

European competitiveness must rely more on non-price elements related to **innovation**, **technology** and **organisational** capabilities (rather than solely on prices, costs).

To go deeper: a novel firm-level micro-aggregated database

Coverage:

17 EU countries

13 of which EA, 80% of EA GDP

Period:

1995-2012

with delayed entrance of some countries

Sector:

9 macro-sector

1-digit industry

≈ 60 sectors

2-digit industry (NACE rev.2)

Critical indicators are now available across countries

Productivity and allocative efficiency	Financial	Trade	Competition	Labour
Labor productivity	Investment Ratio	% permanet exp.	Weighted PCM	% firms that increase/decrease employment productivity or ULC between t and t+3
TFP	RoA	% sporadic exp.	Sector-specific mark-ups	Characteristics of growing and shrinking firms
ULC	Cash holdings	Export value	Sector-specific collective bargaining power	Share of High-growth firms
LC per employee	Leverage	Export value added	Concentration measures	
Firm size	Financing gap	Productivity premium of exporters		
Capital intensity	Collateral			
Static Allocative Efficiency	Equity to Debt			
Dynamic Allocative Efficiency	Cash flow			
	Implicit interest rate			
	Trade Credit/Debt			
	Debt burden			
	Credit constraint index			

As well as very telling joint distributions at firm-level (e.g)

Productivity and allocative efficiency

- Labor productivity
- TFP
- ULC
- LC per employee
- Firm size
- Capital intensity
- Static Allocative Efficiency
- Dynamic Allocative Efficiency

Financial

- Investment Ratio
- Cash holdings
- Leverage
- Financing gap
- Collateral
- Equity to Debt
- Cash flow
- Implicit interest rate
- Trade Credit/Debt
- Debt burden
- Credit constraint index

Trade

- % permanet exp.
- % sporadic exp.
- Export value
- Export value added
- Productivity premium of exporters

Competition

- Weighted PCM
- Sector-specific mark-ups
- Sector-specific collective bargaining power
- Concentration measures

Labour

- % firms that increase/decrease employment productivity or ULC between t and t+3
- Characteristics of growing and shrinking firms
- Share of High-growth firms

Trade performance and Firm productivity are related

- Work of Barba Navaretti et al. (2015) shows that trade outcomes are better explained when in addition to traditional factors (e.g. relative prices and demand and <u>average</u> productivity) one accounts for the **dispersion and asymmetry underlying** firms' productivity distribution

- …**right-tails matter**!

➡ If the **target** is the **overall export performance**, policies should aim at the **most productive** section of **firms**, most likely largest and exporters

- Work co-authored with Pappada' (2014) studies the **implications** of differences in **productivity distributions** on **Eurozone's external rebalancing**

- For a given required **external adjustment**

The **larger** is the "**right tail**" of the distribution
i.e. the higher the number of potential exporters

The **lower** the **required change in real exchange rate**

- The paper shows that external rebalancing in **Spain** and **Italy** requires a **larger relative price adjustment**, compared to countries (e.g. Germany) that would benefit from a higher density of high productive firms.

Implications on external rebalancing

- Work co-authored with Pappada' (2014) studies the **implications** of differences in **productivity distributions** on **Eurozone's external rebalancing**

- For a given required **external adjustment**

The **larger** is the "**right tail**" of the distribution
i.e. the higher the number of potential exporters

The **lower** the **required change in real exchange rate**

Strike a more precise **balance** between **relative price adjustment** and other **more structural policies** that allow **more productive firms** to **grow** and to **respond to export opportunities** in foreign markets

- Main CompNet contributions to the literature, from a EU perspective:

1. The **role of** international linkages of GVCs as **transmission mechanism** of shocks **across borders**
   - Altomonte et al. (2012) argue that demand shocks lead to amplified fluctuations along the supply chain through the adjustment of inventories ("*bullwhip*" effect);
   - Endrész and Skudelny (2015) analyse the role of trade networks in propagating the global financial crisis;
   - Soon an **e-book on GVCs** will be published in collaboration with R. Baldwin (CEPR VoxEU, early July).

Call for much **deeper** consideration of how **GVCs** are **affecting trade policies frameworks**

2. **Response** to exchange rate movements are **heterogeneous** across **firms** and therefore aggregate estimates of elasticities can be biased:

   a) Berthou et al. (2015) find that export elasticity relative to ULC-REER is **inversely correlated** with **size** and **productivity**

Firm Size	Δln(REER)
1st quartile	**-1.760*** **
2nd quartile	**-1.165*** **
3rd quartile	-0.766***
4th quartile	-0.477*

TFP	Δln(REER)
1st quartile	**-1.678*** **
2nd quartile	**-1.229*** **
3rd quartile	**-0.670*** **
4th quartile	**-0.599** **

Sources: Berthou et al. (2015).
Notes: *** p<0.01, ** p<0.05, *p<0.10. Includes controls for macro determinants and sector/firm characteristics.

➔ **Exports** by **largest** and **most productive firms** are **less sensitive** to exchanges rates movements

b) Work co-authored with Demian (2015) shows that **elasticity** of exports to exchange rate fluctuations is **lower** in sectors with a **higher dispersion** of **productivity**.

That there is an **asymmetry** between responses to an **appreciation** and **depreciation**.

Finally, that **size matters** → only large exchange rate movements appear to have a significant impact on export.

→ Since there is still not consensus in the literature, we **need further micro-based analysis** on firm responses to exchange rates shocks

- The **aggregate productivity performance** in a given country or industry can be boosted **not only** by raising average **productivity** (***within-firm***) but also by appropriate resource **reallocation towards** the **most productive firms** (***across-firms***).

- CompNet has concentrated on the second channel focusing on **policy-induced distortions** in labor, capital, and product markets.

- An item also mentioned by the President Draghi in Sintra last May, underlining the importance of **structural reform** aimed at **encouraging reallocation** to increase both *resilience* and *growth* of our economy.

- During this Conference we will have ample time to tackle this issue.

CompNet the way ahead

- After three years of work together time is ripe to consolidate our efforts and define our maturity….

- We aim at:

  i. setting up a **self-governed Network**, even **more open** to **external contributions** by Academics and other institutions

  ii. keeping **updated** our data sets (macro and firm-level based) and make it available to researchers

  iii. functioning as a **forum for research** on competitiveness and productivity

  We have identified in the report two meta-research streams:

  → Resources allocation and growth

  → International trade and Global Value Chains (GVCs)

  …but we are very open to other venues

Enjoy the conference!