EUROPEAN CENTRAL BANK

EUROSYSTEM

CompNet The Competitiveness Research Network

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Chairman of CompNet
European Central Bank

Introductory remarks

Joint ECB and CNB conference

Productivity and external rebalancing

Prague, 21 – 22 April 2016

***Disclaimer**: the opinions expressed in this presentation are those of the authors and do not necessarily reflect the views of the ECB or of the European System of Central Banks.*

Policy motivation and inspiration

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**

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CompNet goals and governance

The Competitiveness Research Network (**CompNet**) was created in March 2012 with the mandate from the General Council of the EU System of Central banks to:

Provide robust theoretical and empirical link between drivers of competitiveness and macroeconomic performance for research and policy analysis

To do so, CompNet has used a **multi-dimensional** approach (i.e. a set of complementary macro, firm-level and cross-border indicators) also adopting a rather **broad definition of competitiveness** (e.g. productivity)

Since June 2015 CompNet is a **self-governed network** managed by a 10 persons Steering Committee.

The Network comprises about 200 economists from about 50 institutions, comprising Central Banks, International organizations and academics.

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Outline

1. **CompNet**: Where do we stand after one year
2. Main **research** and **policy contributions**
3. The **5th vintage** of the CompNet database
4. **Stylized facts** from the 5th vintage
5. **The way forward**

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1. **CompNet**: Where do we stand after one year

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Research

- In the last year, CompNet members engaged in several projects focusing on productivity, financial constraints, intra- and extra-euro area trade, price and cost competitiveness, investment decisions, corruption, etc.

- From **June 2015**:
  - **16** papers were submitted and are under review at the ECB WPs
  - **2** have been published on peer-reviewed journals

→ for a total of 45 papers so far from 2012

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Latest achievements II

Database

- We have finalised the 5th round of firm-level based CompNet database
- Data is now ready to be disseminated via an **online platform**
  - Free access for CompNet members
  - For externals researchers:
    - → an extensive user guide is now available
    - → data access requests will be evaluated by the Steering Committee

Membership

- Enlarged substantially with the addition of non-NCB members, e.g. Halle institute, New Zealand Productivity Commission, Centre for Competitiveness of Fribourg University
- New active participants to the 5th round: realized (Czech Republic, Denmark and Latvia), ongoing (Switzerland and New Zealand)

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Interaction with International Organisations

1. World Bank
   - Pilot project ongoing using CompNet methodology on their data
   - Major upcoming joint Conference (WB-CompNet) on "Productivity for Equitable Growth", Washington, 18-19 October 2016
2. EIB
   - CompNet members' inputs to forthcoming EIB reports
3. EU Commission/Eurostat
   - Discussion on indicators sharing – both macro and micro

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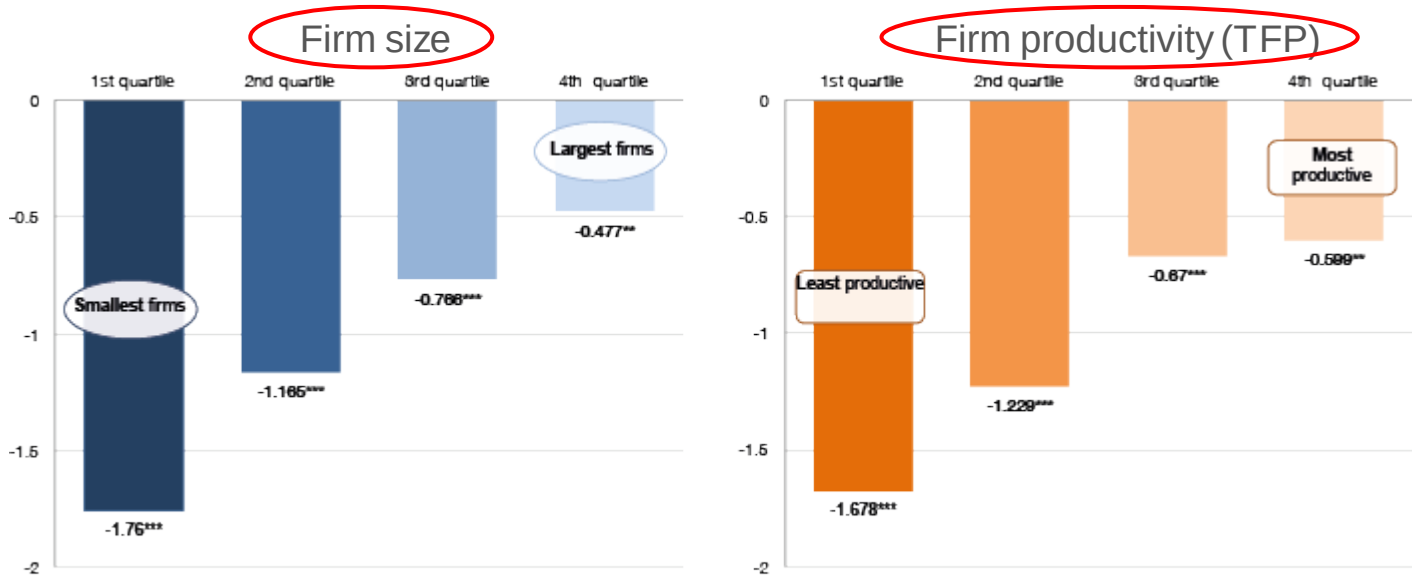
2. Main **research** and **policy contributions**

⟶ We are very active and present in the policy debate

Do exchange rate devaluations work?

→ The impact might change with respect to



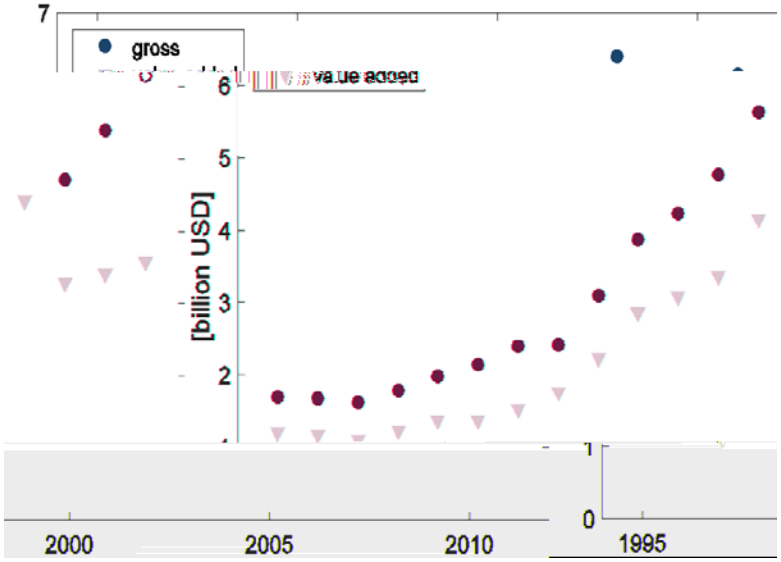
Important implications on aggregate export performance:

- The impact seems to be limited in the short run, as largely determined by the (low) reaction of the largest and most productive firms
- Exchange rate devaluation can be very effective in helping more vulnerable exporters to succeed in international markets

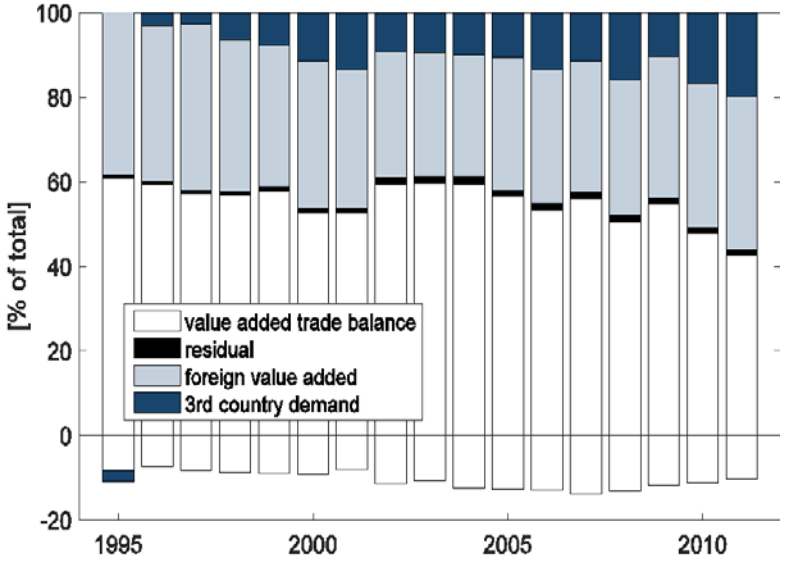
Source: Berthou, A. and di Mauro, F. (2015): "Exchange rate devaluations: When they can work and why", vox.EU, 24 December.

Concentrating on intra-euro area trade imbalances can be misleading

- There is growing **divergence** between the measure in **gross terms** vs. **value added**
- Growing share of imbalances can be attributed to **3rd country demand** (therefore cannot be controlled by demand and relative price conditions)



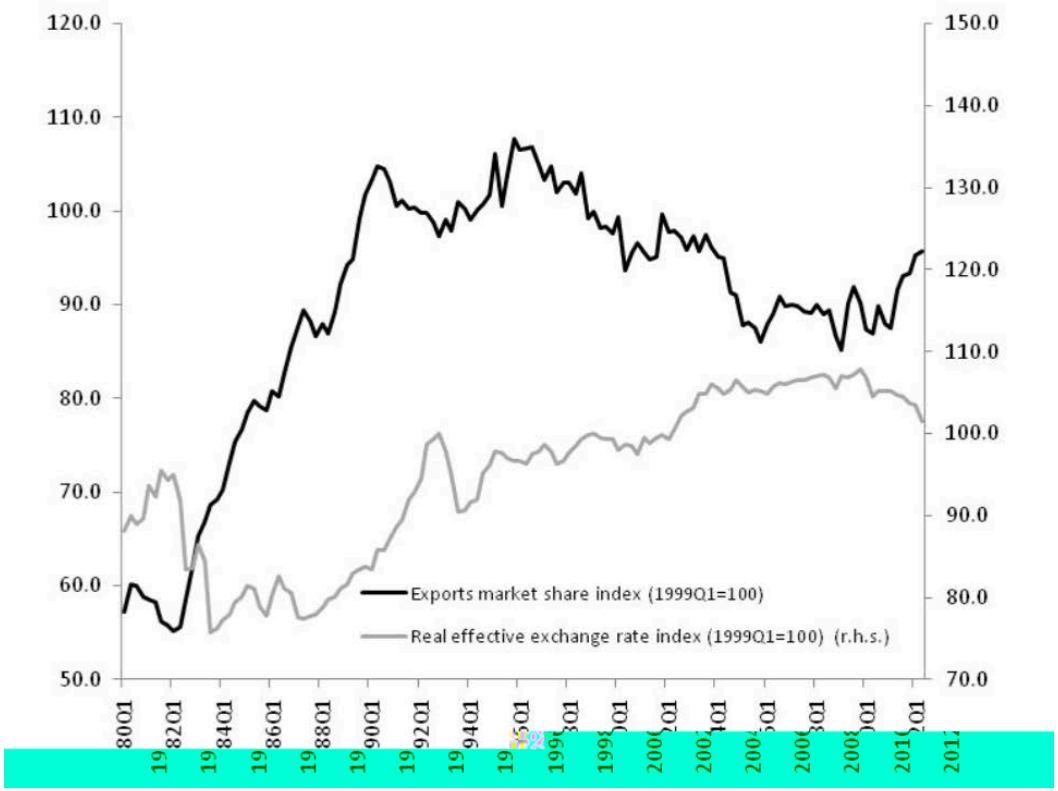
Note: Standard deviation of bilateral trade imbalances within the euro area.



Note: Variance decomposition of bilateral gross trade imbalances within the euro area.

Source: di Mauro, F., Nagengast, A. J. and Stehrer, R. (2016): "On the correction of Euro area external imbalances and the pitfalls of bilateral imbalance measures", vox.EU, 29 January.

Price competitiveness indicators are far from enough to explain export performance



The role of domestic demand: Strong negative relationship between lagged domestic demand developments and export performance in the short-run

Source: Esteves, P. and Rua, A. (2015): "Is there a role for domestic demand pressure on export performance?", Empirical Economics.

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4. **Stylized facts** from the 5th vintage

→ **With 2013 we can now see signs of the recovery phase**

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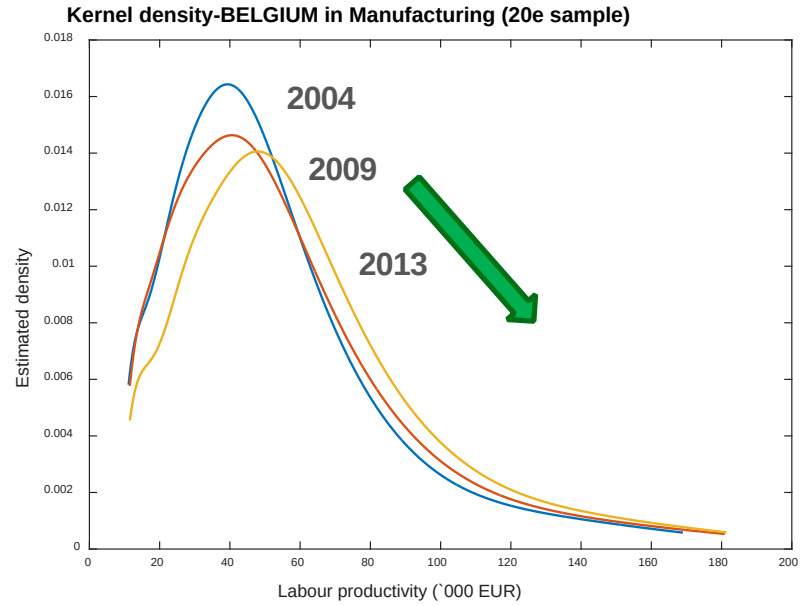
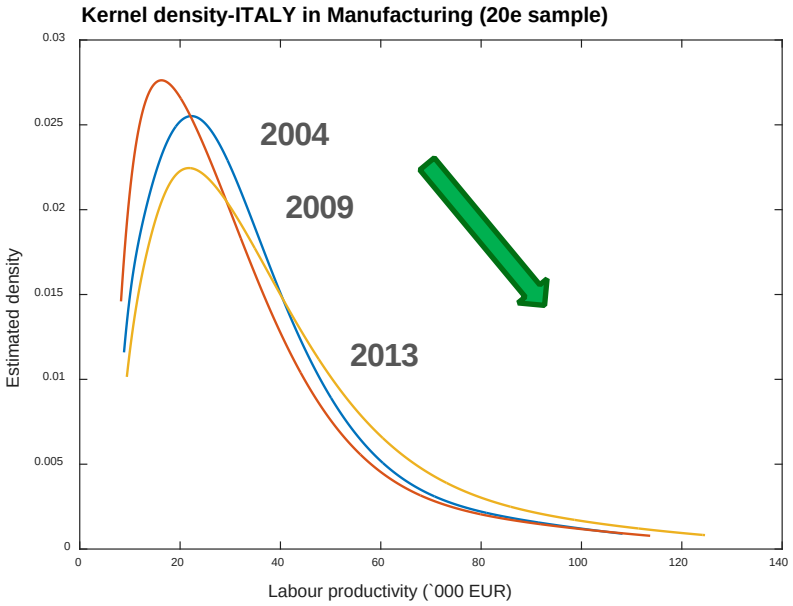
Labour productivity distribution in 2004 and 2013



Density estimated by interpolating 11 moments of the labour productivity distribution



Density estimated by interpolating 11 moments of the labour productivity distribution

- In 2013, the labour productivity distribution was more skewed to the right relatively to the pre crisis period

→ Increase in the share of the most productive firms

Policies should continue making the "right-tail" even thicker

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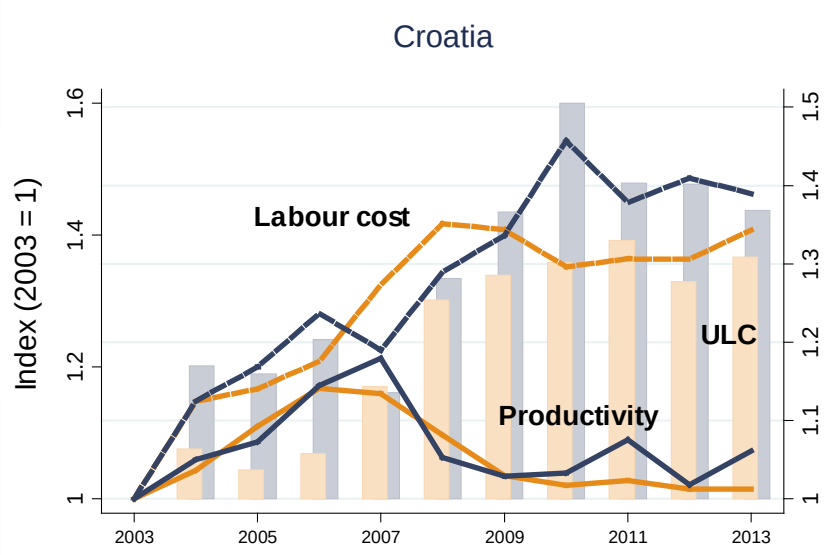
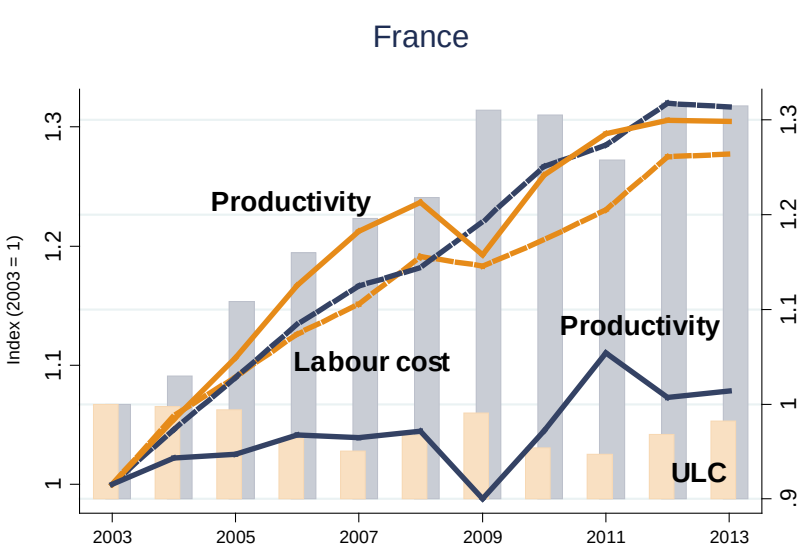
Labour cost and productivity dynamic in Croatia and France





- In the last decade, there has been a growing gap between labour productivity and labour cost … but for different reasons:
  1. *In Croatia, overall labour productivity stagnated or declined after the crisis*
     → *see ULC*
  2. *In France, costs were diverging, but only for the least productive firms*
     → *see ULC of most productive firms*

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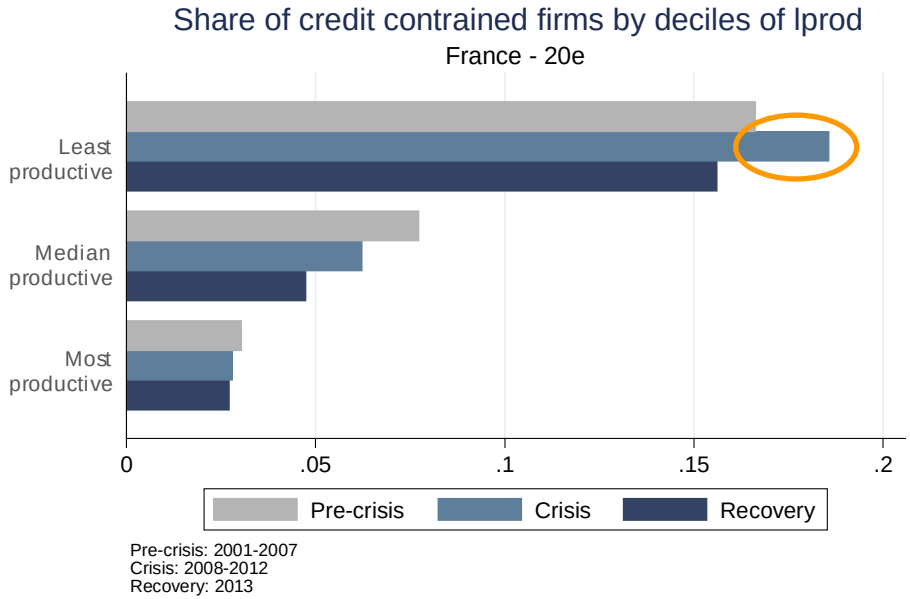
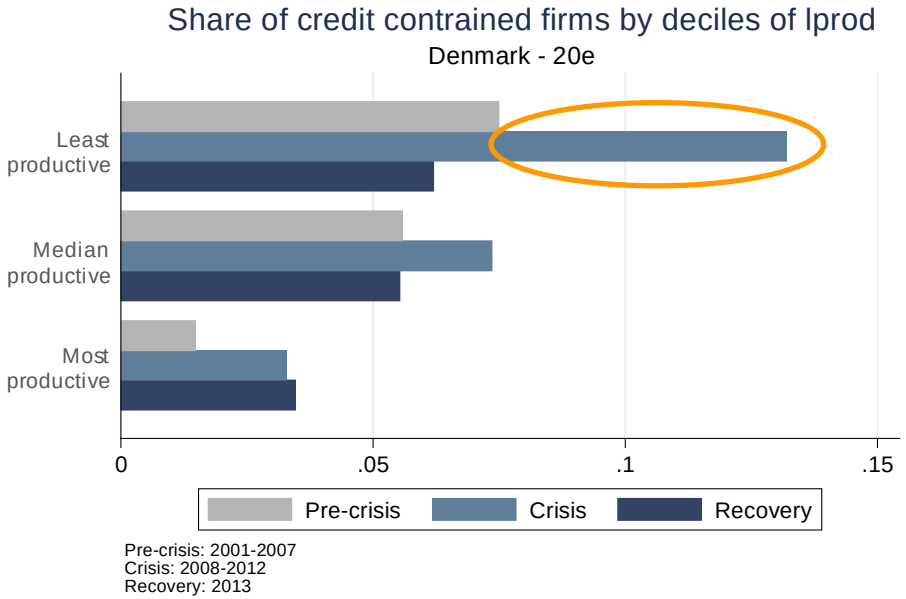
How is productivity related to credit constraints (cc)?

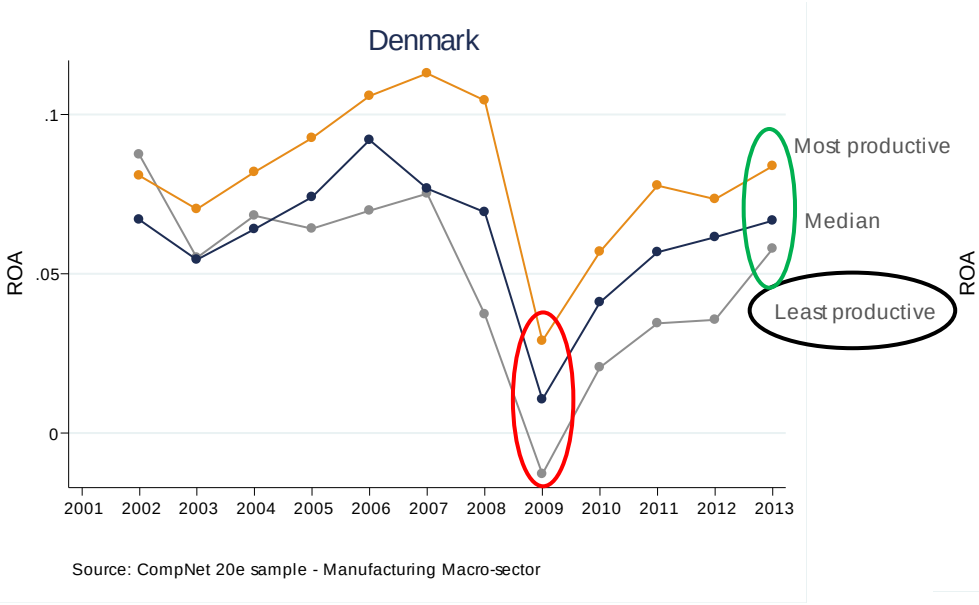
CompNet has computed Credit Constraints indicators based on firms' financial characteristics and information available in the SAFE survey



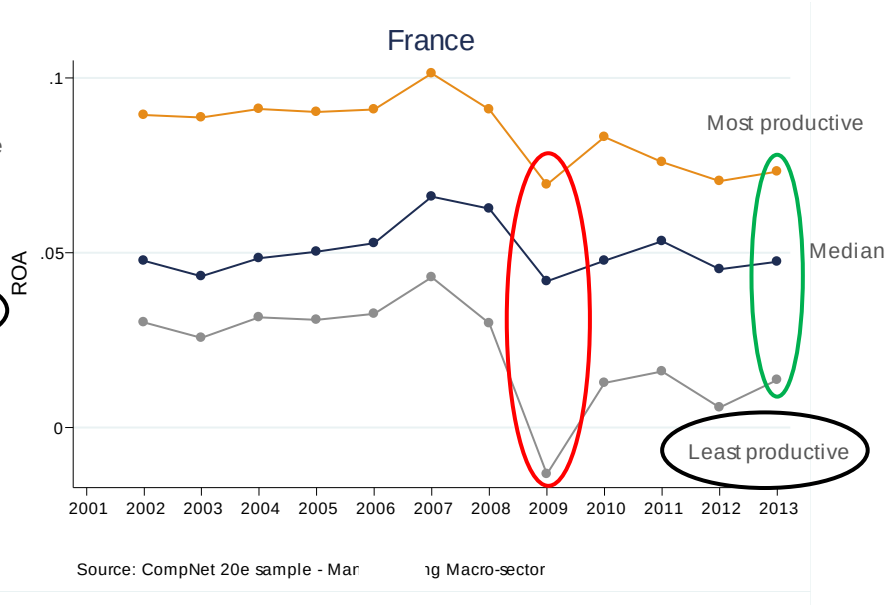


- Overall, the most productive firms seem to be on average less credit constrained
- The credit crunch hit mostly the least productive firms
- In all countries access to credit improved in the recovery period (2013)
  With the exception of only Denmark and Finland

Profitability (ROA) and productivity distributions

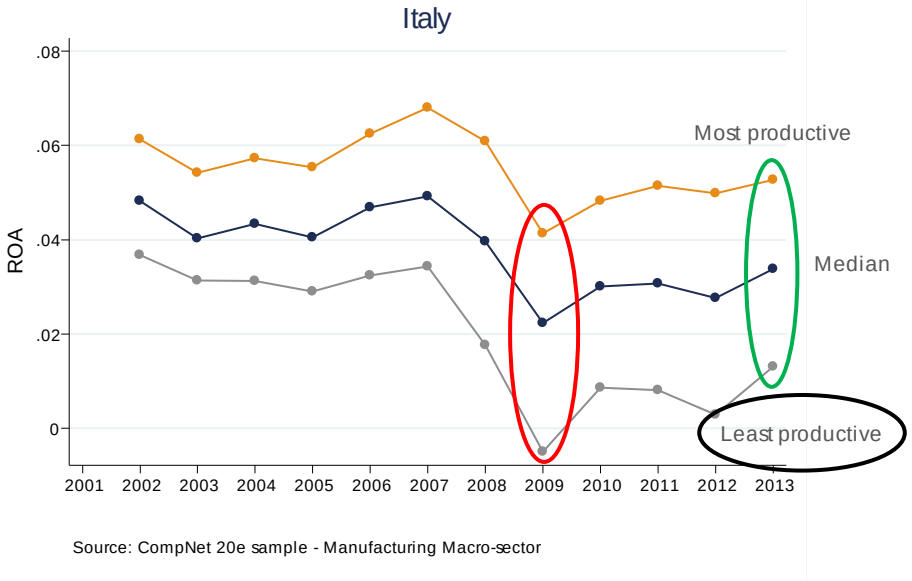


Source: CompNet 20e sample - Manufacturing Macro-sector



Source: CompNet 20e sample - Mar ıg Macro-sector

- In 2009, there has been a sharp decline in Returns on Assets (ROA)
- Low productive firms were the most affected by the crisis
- In 2013, all firms recover in their profitability



Source: CompNet 20e sample - Manufacturing Macro-sector

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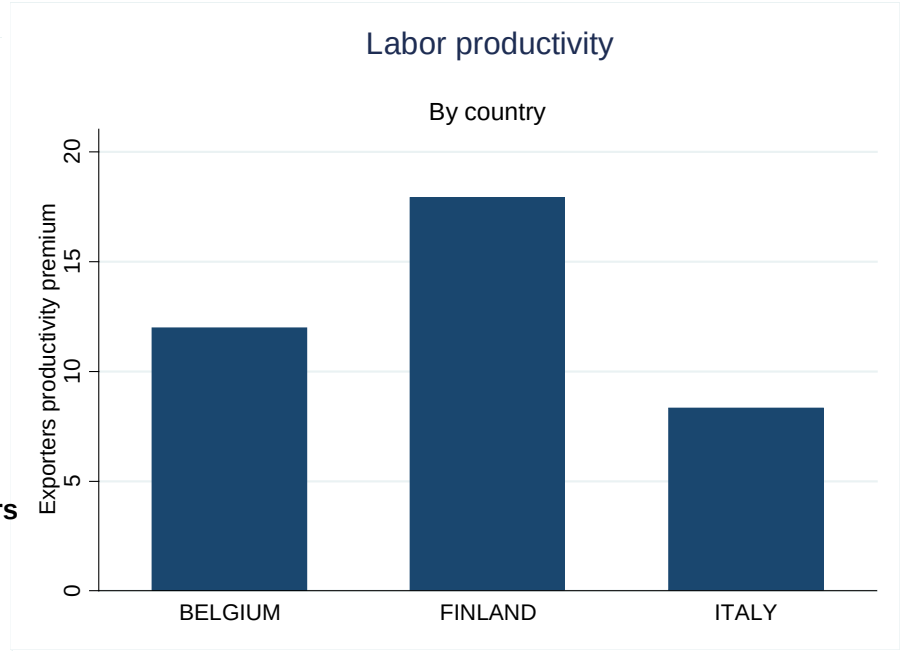
Exporters' features



- Overall, being an exporter is associated with higher levels of productivity (productivity premium)
- During the crisis, the drop in productivity has been more pronounced for exporters
  They seem to be more vulnerable to macro-economic shocks
- Export productivity premium is highly heterogeneous across countries

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1. CompNet has handled **successfully the transition** to a permanent, self-managed network

2. Over the last year, we had

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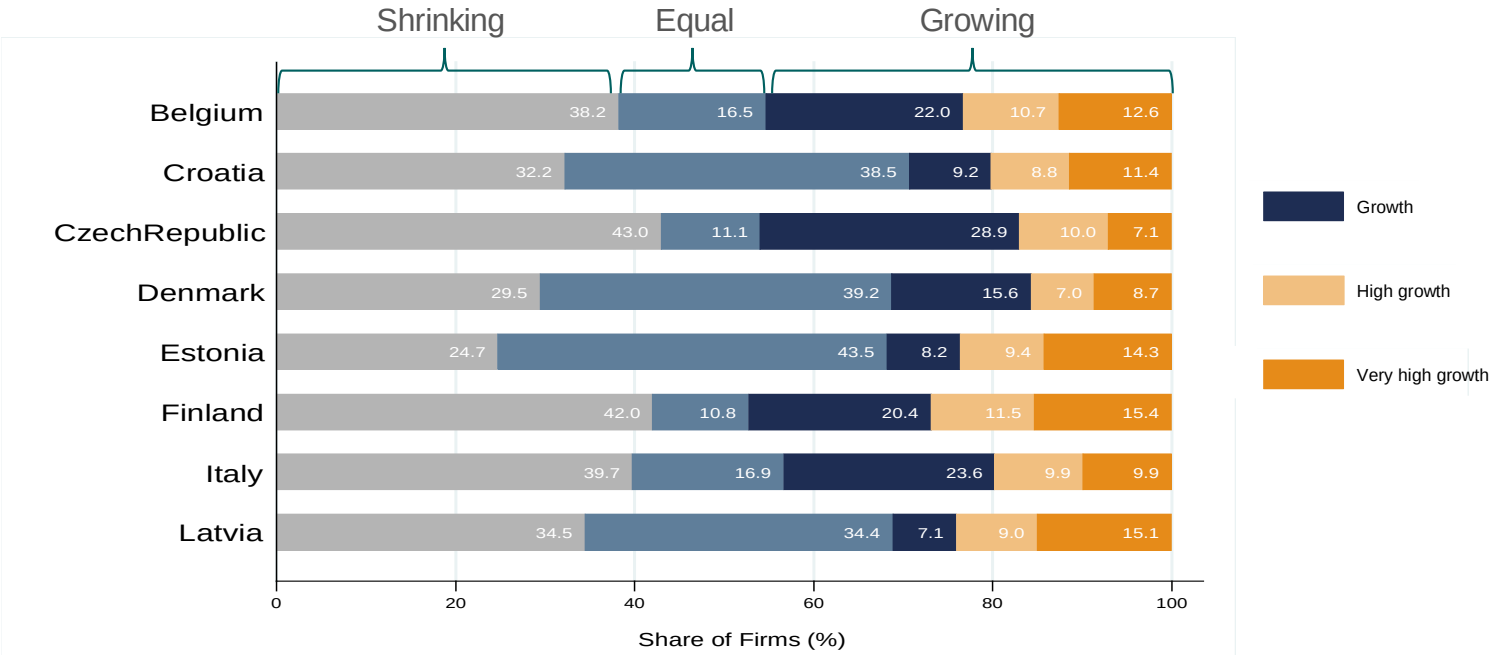
Firms' size class dynamics

- **CompNet computes a variety of transition matrices**

→ extent to which firms have been growing over a 3 years period

What can we learn from them?



- On average **more than 30% of firms has been expanding over the 2010-2013 period in terms of employment**. Some of them remarkably:

  → "**high growth**" firms, between **10%** and **20%** in average per year
  → "**very high-growth**" firms, over **20%** in average per year

- Still, in 2013, about 30% of firms in each country did not grow

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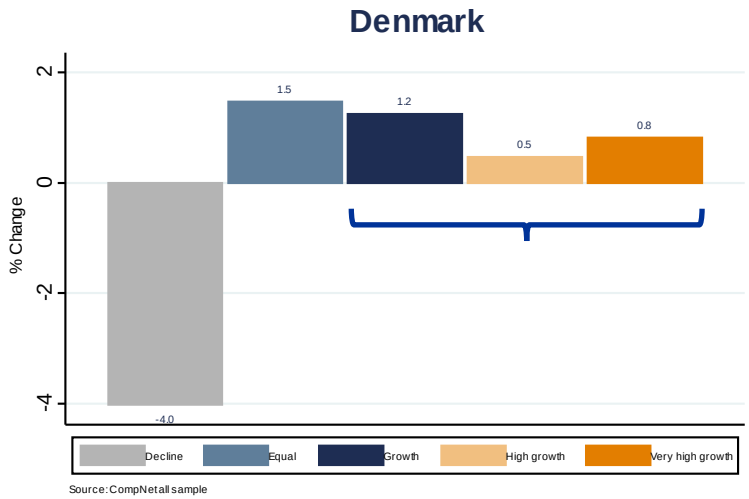
Firms' size class dynamics

How this compares to the period of the crisis?

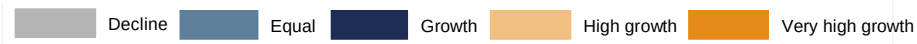


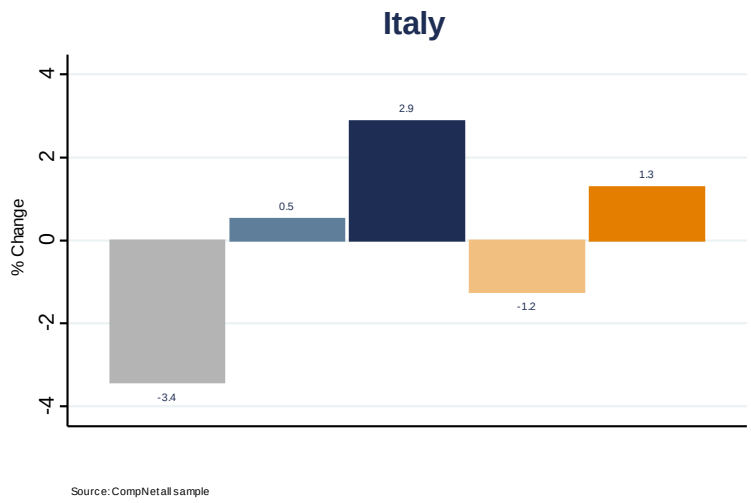
Most European countries show a steady recovery after the crisis

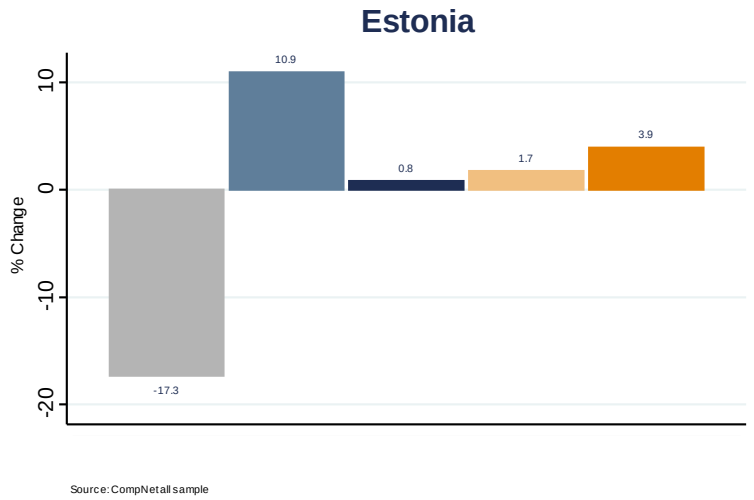
→ ***The share of firms growing is higher***

→ ***The share of firms declining in size is lower.***

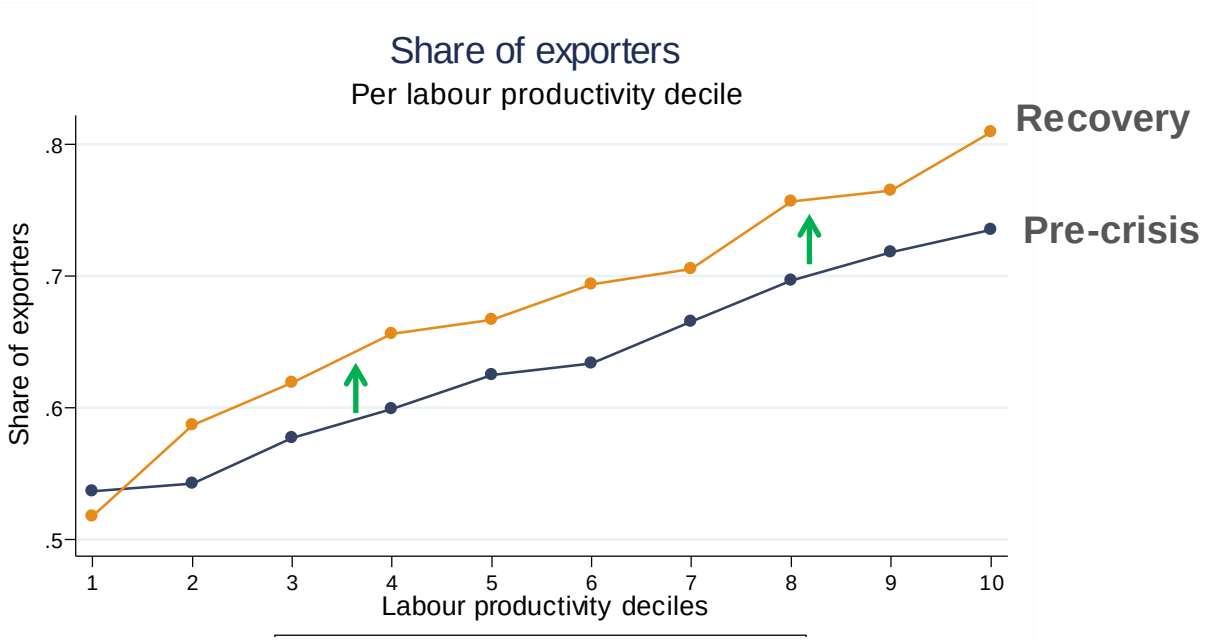
This is more pronounced for transition economies (e.g. Estonia 17pp increase in the number of firms declining in size)







Share of exporters by decile of labour productivity



Average over country
Source: CompNet 20e sample – Manufacturing macro-sector

- The higher the labour productivity the higher the share of exporting firms
- Almost 80% of the most productive firms are exporters

→ In the recovery period (2013), the share of exporting firms increased heavenly across the deciles of the labour productivity distribution

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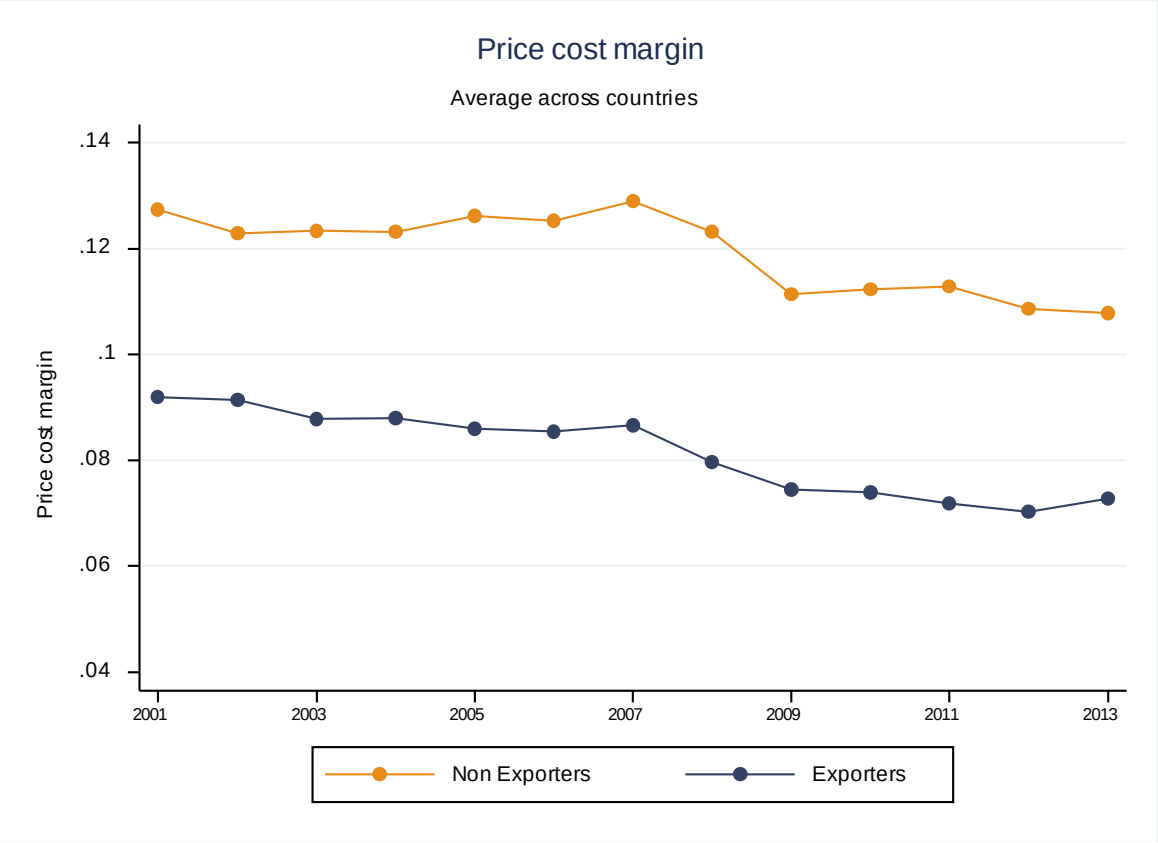
Exporters' features



- Exporters on average have lower price cost margins
  Non exporters charge higher margins as they face less market competition
- Price cost margins have been decreasing over the last decade

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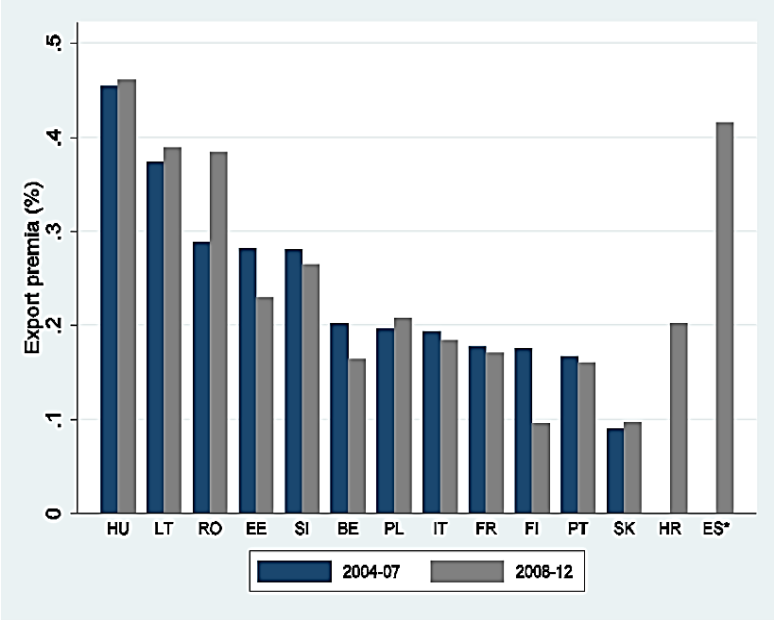
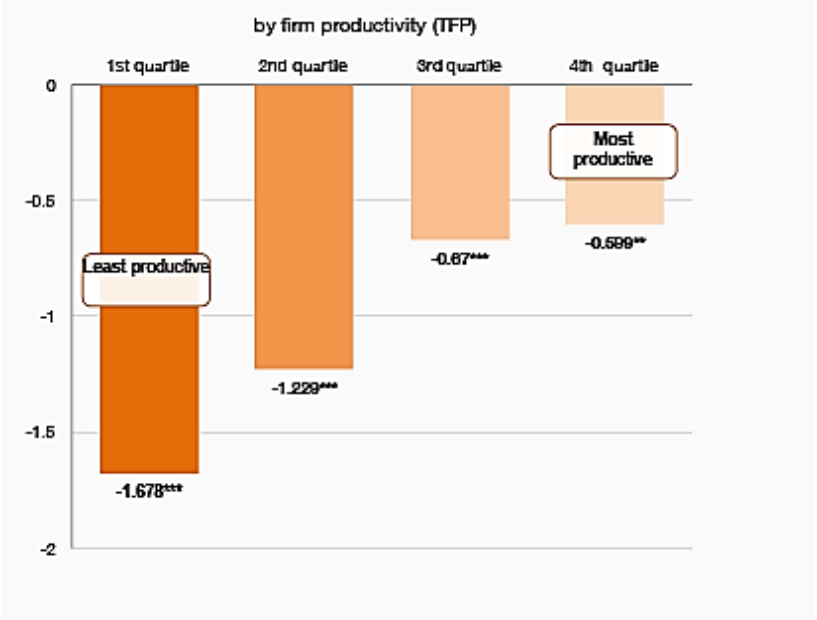
Explaining Countries' Export Performance

- Aggregate **export** performance largely driven by **most productive** firms (export premia on average 20%)
- Large and unproductive feature lower trade elasticities to REER movements



Note: Export premia in labour productivity.



Note: Export elasticity with respect to ULC-REER by productivity quartile.

Source: Berthou, A., Dhyne, E. and the CompNet taskforce (2015): "Assessing European firms' exports and productivity distributions: the CompNet trade module", ECB WP 1788; Berthou, A., Demian, V. and E. Dhyne (2016): "Exchange rate movements, firm-level exports and heterogeneity", forthcoming.

CompNet satisfies strong demand for more granular data for research and policy analysis

- Implications of firms' heterogeneity is crucial for research toolkit, thus calling for a thorough micro-founded analysis of e.g. TFP growth and trade patterns
- Institutions such as the IMF, European Commission, Eurostat and OECD have expressed keen interest in the CompNet analyses and data

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