

CompNet

The Competitiveness Research Network

CompNet and MICROPROD:

Objectives and interactions

Filippo di Mauro

*National University of Singapore
Business School*

Chairman of CompNet

IWH - Halle

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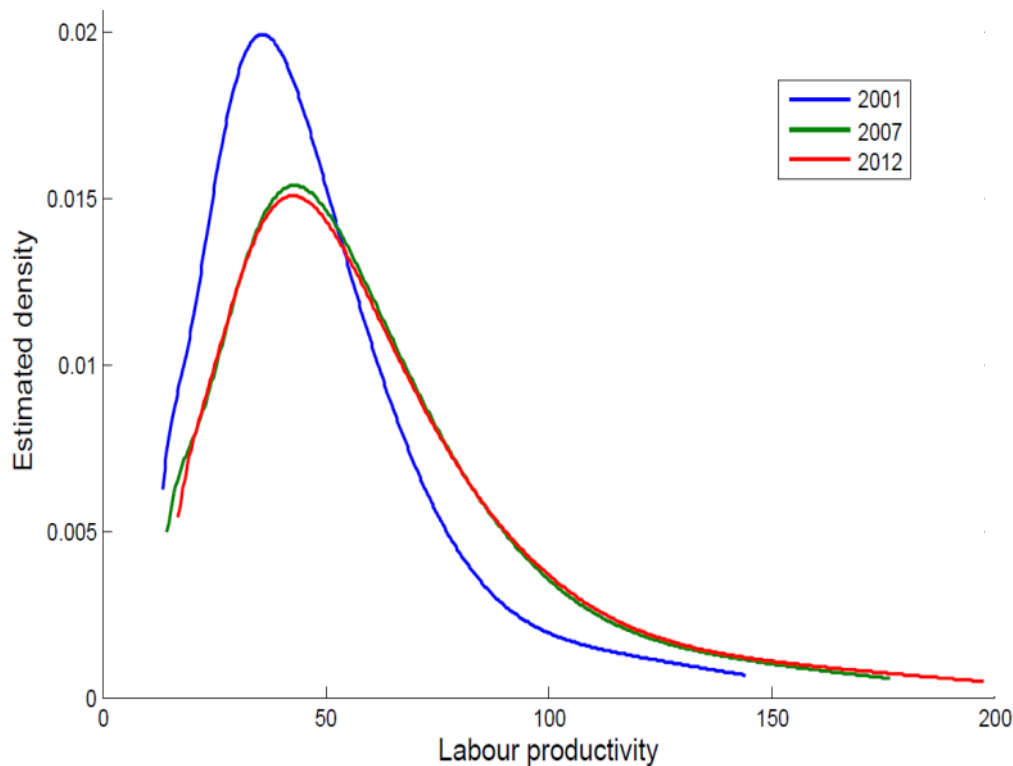
Outline

1. Why the micro perspective
2. CompNet dataset: stylised facts
3. CompNet: mandate, organisation
4. Interaction
5. Conclusions

The rationale of firm-level perspective

- Firm performance distribution is **very disperse** and **asymmetric**
- Most firms are around an “average” LOW performance,
- and **only** a **few** which are **very productive** in the “**right-tail**” of the distribution (the so called “*happy few*”)

Evolution of labor productivity distribution in France
Manufacturing sector - firms with 20+ employees



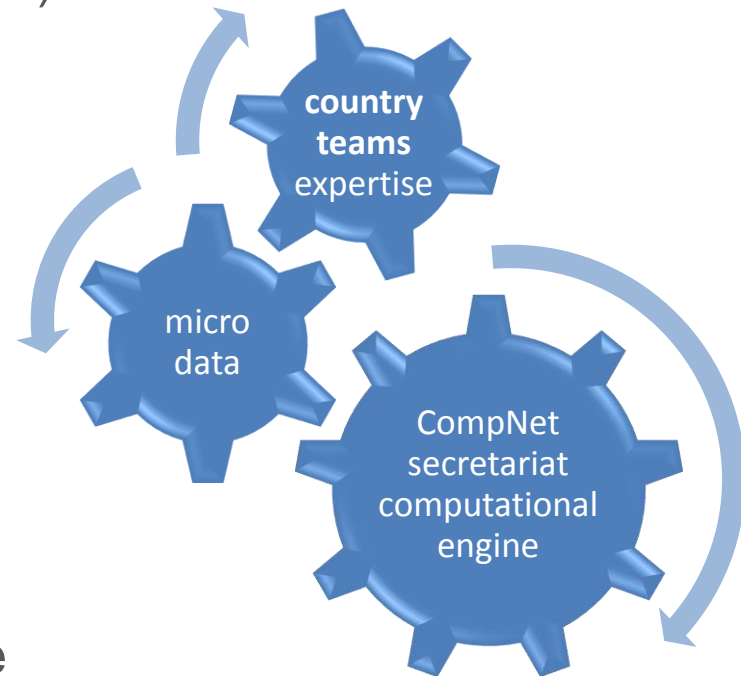
Why do economists care about firm heterogeneity?

Because they want resources (capital and labour) reallocated from low to high productive firms, to increase the economy aggregate performance

➔ assessing this heterogeneity is also critical for **monetary policy**

The micro-founded Competitiveness Research Network (CompNet) dataset

- ✓ We use **existing** (no new surveys) firm-level data, mostly from business registers, to construct a wide set of relevant business indicators (productivity, costs, employment..)
- ✓ **Common codes** to **aggregate indicators** at industry, macro-sector and country level in order to solve confidentiality issues
- ✓ **Common methodology** to **harmonize** the resulting set of indicators across countries in terms of measures **definition**, treatment of **outliers**, **deflators** (based on Eurostat sectorial value added) and **PPPs**.



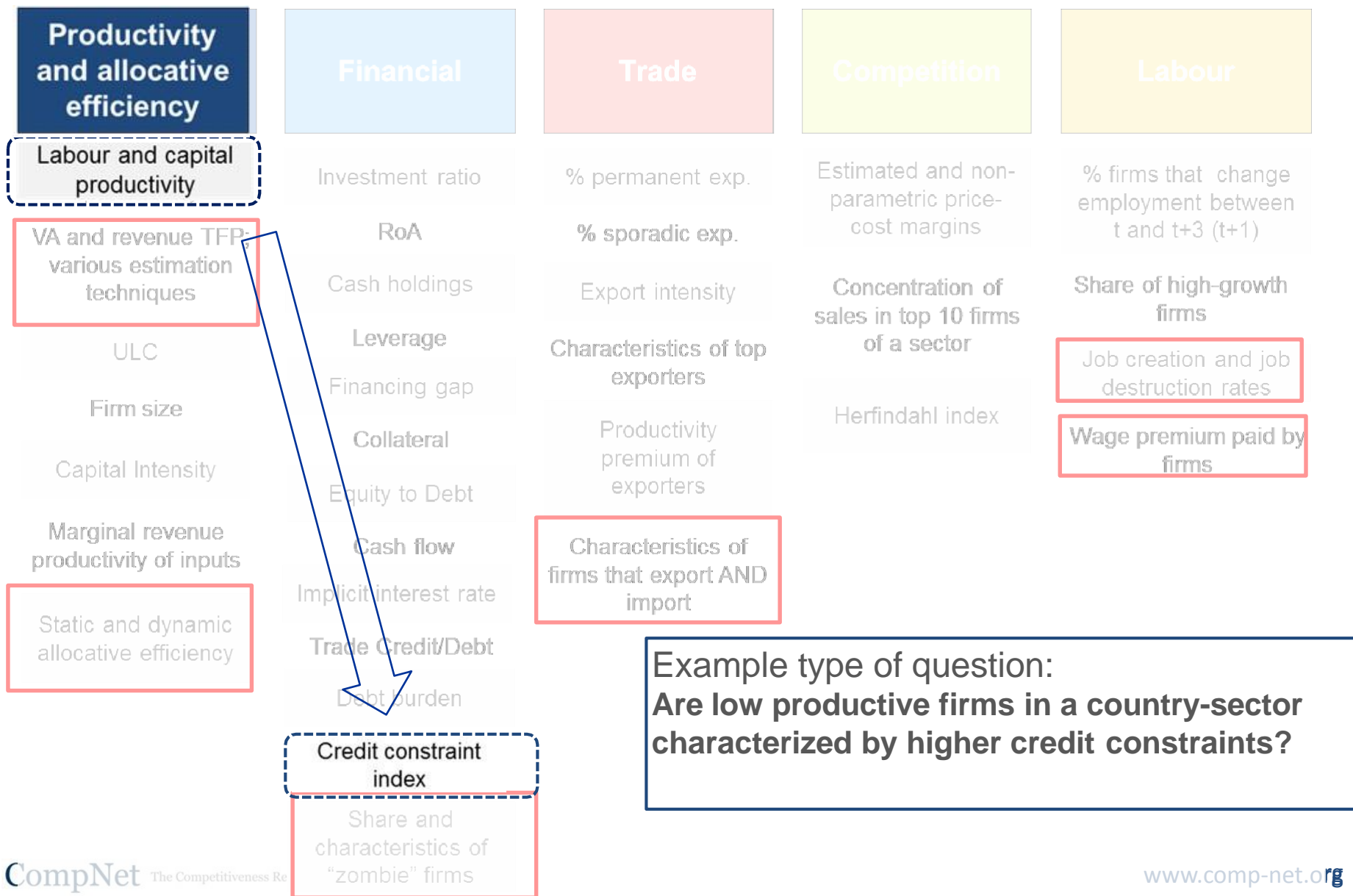
The micro-founded Competitiveness Research Network (CompNet) dataset

1. Our aim is to create a Minimum Common Set of indicators which are also cross-country comparable
2. At the Center, our Secretariat which manages the data collection, does not see the raw firm level data (confidentiality is ensured), but sector averages
3. In addition, however, we have
 - ➔ the full distribution for the (more than **70**) **critical** business variables we collect
 - ➔ most notably, the database includes more than **300** joint distributions linking different firms' characteristics

Five broad categories of variables are available (for 60 sectors)

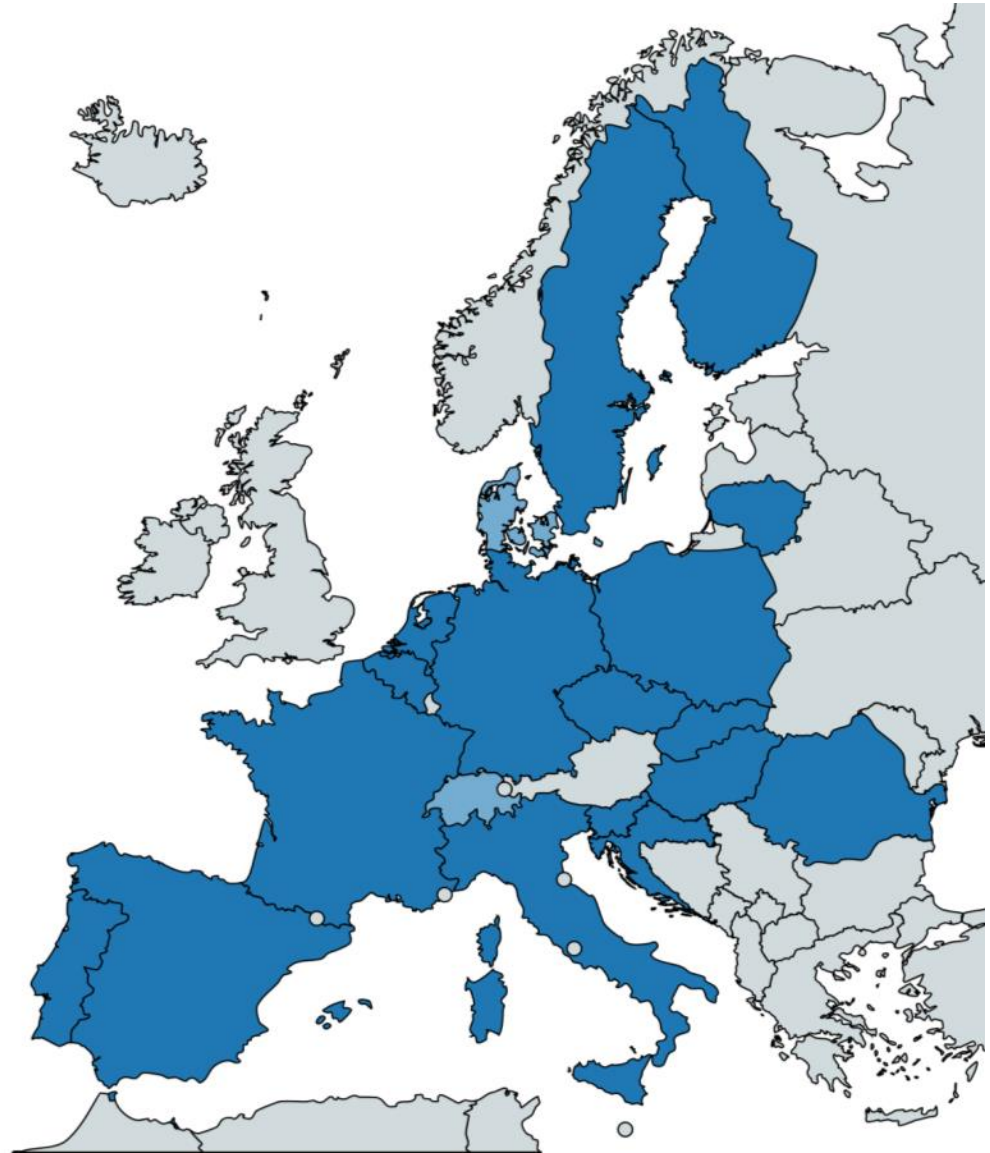
Productivity and allocative efficiency	Financial	Trade	Competition	Labour
Labor productivity	Investment Ratio	% permanent exp.	Weighted PCM	% firms that increase/decrease employment productivity or ULC between t and t+3
TFP	RoA	% sporadic exp.	Sector-specific mark-ups	Characteristics of growing and shrinking 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			

Example of joint distributions



The 6th vintage of the CompNet Dataset (2018)

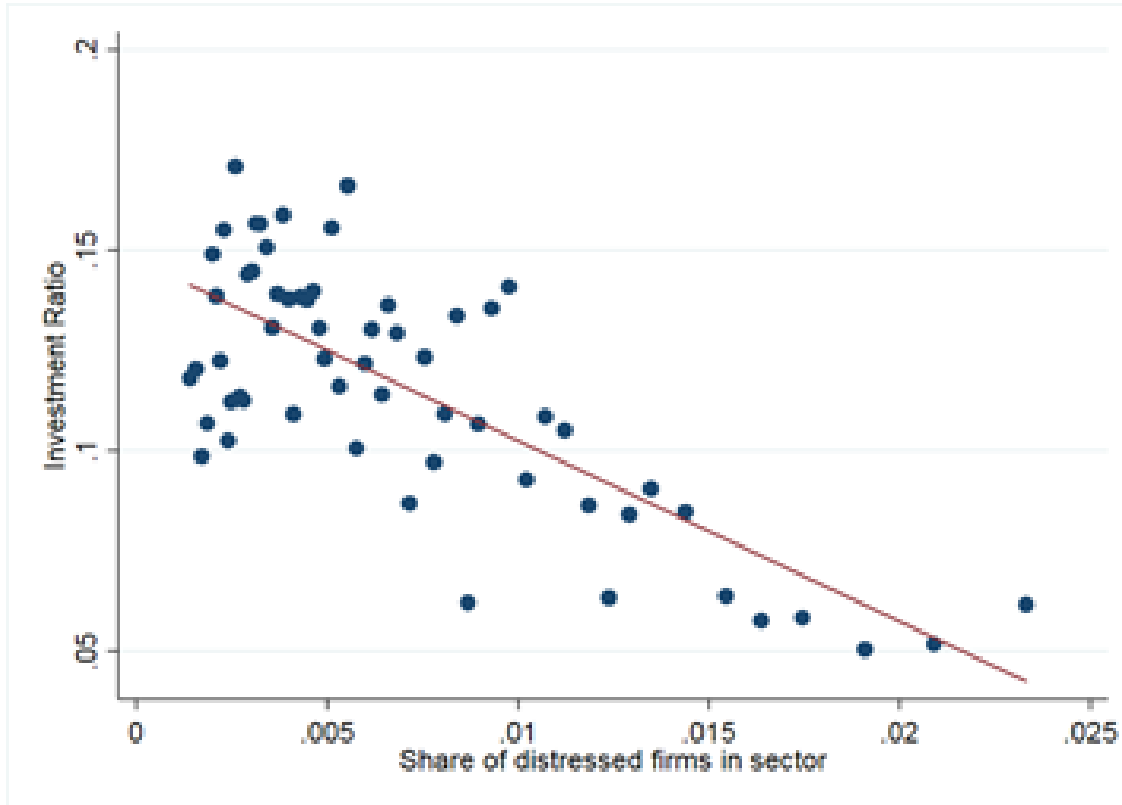
- Time period:
 - **1999 – 2015 (added 2 years)**
- Data coverage:
 - (up to) **90% in firms**
 - (up to) **86% in employees**
- Geographical coverage:
 - **19 EU countries**
 - **and two other in pipeline (CH,TU)**
- Data collection:
 - Richer set of **variables**
 - More efficient **codes**
- Data are available:
 - **on line** for CompNet members
 - **upon request** for others



Some examples of the results for Europe

Stylized facts: 1) Distressed firms and investments

Do distressed firms have a sizeable economic impact?



Sectors with a higher share of distressed firms show significantly **lower investment ratios** and job creation rates

Sector investment and share of distressed firms
(median investment of the 2-digit industry and share of distressed firms)

*Source: 6th vintage of CompNet, full sample.
Notes: Firms with interest payments higher than operating profits for 3 consecutive years, conditional on positive profits.
Countries included: BE, CZ, FI, HU, IT, LT, PT, RO, SP, SE.
Binscatter controlling for country FE.*

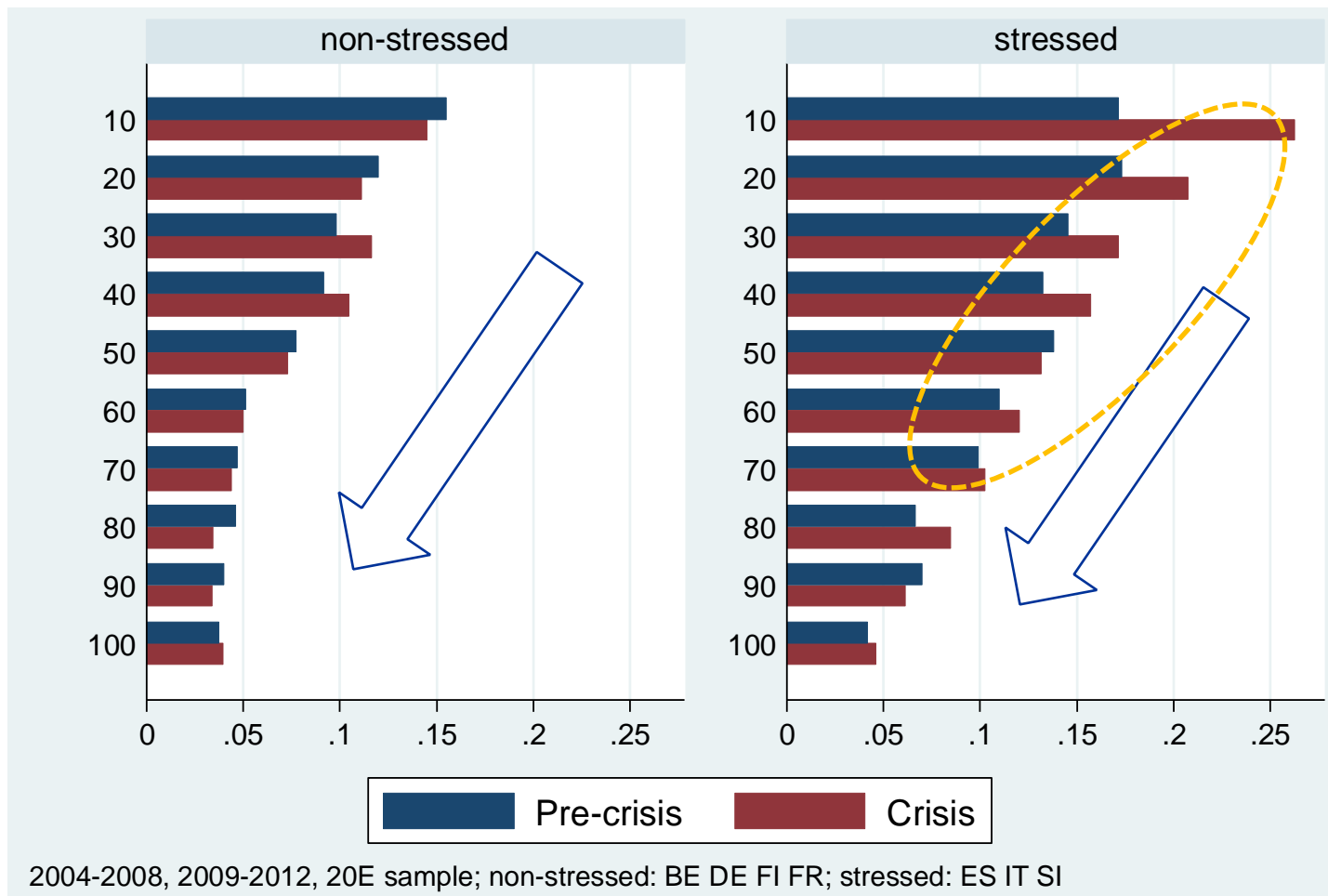
... Most productive firms are not credit-constrained

Share of credit constrained firms by deciles of labor productivity
ICC index estimated within CompNet

*Least
productive*



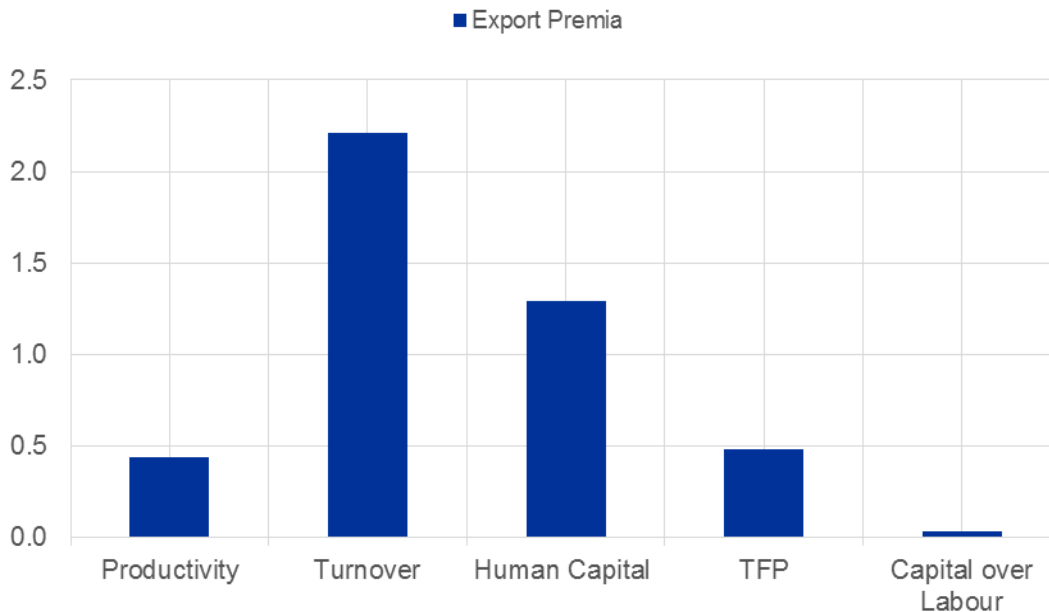
*Most
productive*



Stylized facts 2: How happy are the happy few?

Performance premia of exporting firms over domestic firms in the same 2-digit industry

(Dummy coefficient for exporting firms after controlling for country and time FE)



Sources: 6th vintage, CompNet, full sample

Notes: The chart shows the coefficients of the export dummy, indicating whether the firm is exporter or not, from OLS regressions where the dependent variable is the log of the performance indicators, controlling for country, time and sector dummies. Countries included are HR, FI, FR, HU, IT, RO, SI and SE.

- The chart shows the coefficient of a dummy for exporting firms relative to non-exporting firms in same sector
- Exporting firms are significantly larger, employ more skilled labor and are more productive
- We have data for 60 sectors and 18 countries, which can be useful for benchmarking

CompNet organization and mandate in brief

CompNet mandate

1. CompNet was born in 2012 as an initiative of the European system of Central Banks with a double mandate:
 1. Provide a forum for research on productivity/competitiveness related matters
 2. Provide top standard indicators on productivity drivers, which are firm-level based.
 2. Since early 2017, CompNet is a self-managed Network financed by the ECB together with major European institutions (EC-Grow, EC-EcFin, EIB, EBRD), and academic institutions (IWH-Halle and Tinbergen).
 3. Data providers include, in addition to several National Central banks, an increasing number of Statistical institutes
- ➔ This allow to pursue the objective of improving quality of the dataset and its cross country comparability

Meet the CompNet Team

Steering Committee



Eric Bartelsman



Aurelija Proškutė



Ralph De Haas



Filippo Di Mauro



Ettore Dorrucci



Reint Gropp



Francisco Caballero



Mary Tovsak Pleterski



Debora Revoltella



Martin Suster



Sébastien Roux

Senior Adviser



Meet the CompNet Team

Advisory Board



Ufuk Akcigit



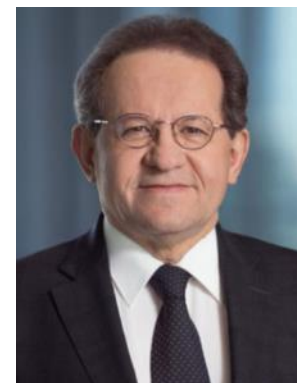
Carlo Altomonte



Eric Bartelsman



Marco Buti



Vitor Constancio



Jan De Loeker



William Maloney



Marc Melitz



*Gianmarco
Ottaviano*



Sergei Guriev



Chad Syverson

Meet the CompNet Team

Executive Committee



Filippo Di Mauro



Ettore Dorrucchi



Steffen Muller

Research Team



Richard Brauer



Matthias Mertens



Roberta Serafini

Meet the CompNet Team

Secretariat



Peter Haug



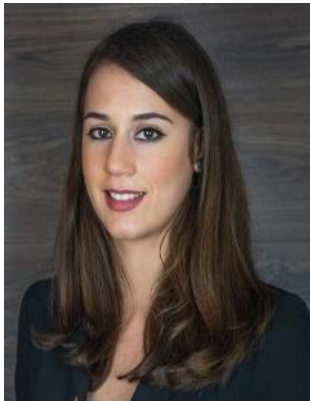
Marco Christophori



Marta Colombo



Marco Lo Faso



Laura Köngeter



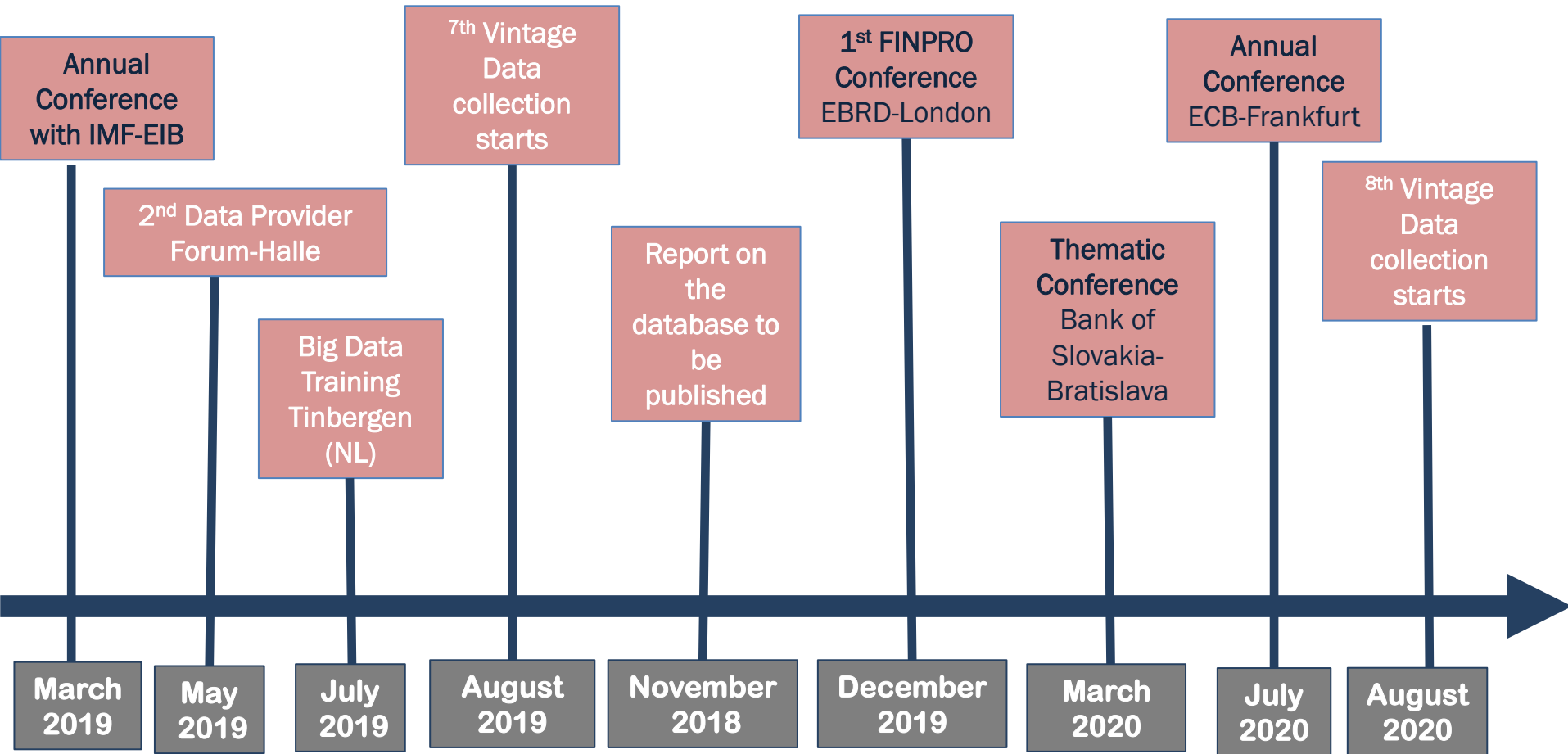
Johannes Amlung



Jonathan Deist

CompNet latest achievements and plans

- **Enlargement** of the Network:
 - More data providers (INSEE (France), Swiss Statistical institute, Central Bank of Turkey, Irish Statistical institute)
- Improvement of the **codes**
- Active in **research** ...
 - over **40 ongoing research projects** based on CompNet data
 - **25 Working Papers** since 2016
 - **31 refereed journal articles** from members of the CompNet network
 - New IWH-CompNet Discussion Paper Series
- ... and in **policy**
 - **European Commission: 9 Country Reports 2019** (Belgium, Germany, Croatia, France, Italy, Lithuania, Netherlands, Romania, Finland)
 - **VOX EU, February 2019, on 6th Vintage**
 - **ECB 2018 Non-Euro Area Surveillance Report**



TIMELINE AND MILESTONES

- MICROPROD is a research project funded within the framework of the **EU Research and Innovation program “Horizon 2020”**, comprises research and statistical institutes leading in the field of micro-level productivity research, and is coordinated by the IWH Halle. MICROPROD aims to
 - (i) expand and deepen the data and methods available for measuring productivity
 - (ii) generate new insights into the causal mechanisms of productivity developments,
 - (iii) make them publicly available.

Common Objectives of MICROPROD and CompNet

- Deepening, widening and harmonizing micro-data availability across the EU.
- Improving the quality and comparability of micro data in Europe.
- Providing guidance and recommendation to statistical offices regarding data collection.
Promoting why “to go micro” and how this can benefit future research and policy work

Respective Specific Objectives

MICROPROD Work Package 1 (WP1)	CompNet
<ul style="list-style-type: none">• providing an extended micro-database for all the proposed projects within MICROPROD.• establishing a guide for the EU for setting up a platform which allows external researchers to use micro data at statistical agencies via remote access or execution.	<ul style="list-style-type: none">• CompNet continues to push the frontier to provide an excellent firm-level based micro-aggregated dataset• Enabling researchers as well as policy advisors to understand underlying dynamics of aggregated trends through the publication of data and dissemination of knowledge (examples: market power, productivity)• Promoting newest policy and research results in various Network events (market power and investments, productivity and Finance)

General Synergies between MICROPROD and CompNet

- MICROPROD can leverage on CompNet member's expertise in the technical and organizational aspects related to extracting and harmonizing confidential firm-level data from national sources
- the new data and productivity concepts from MICROPROD will be utilized and tested by, among others, members of CompNet.
- CompNet will benefit from gained insights through the direct introduction of novel indicators and implementation of new methods in the CompNet codes
- MICROPROD findings will find a natural follow up in CompNet, over and above the three-year duration of the EU-financed project

Scope of the two Events

CompNet Data Provider Forum	MICROPROD Pilot NSI Workshop
<ul style="list-style-type: none">• Improve coding: efficiency, comparability, confidentiality checks• Incorporate new indicators relevant for stakeholders (distressed firms, job flows, human capital...)	<ul style="list-style-type: none">• getting deeper in a number of sets of variables in close cooperation with national statistical institutes<ul style="list-style-type: none">• ICT use• R&D• Intangibles• Trade Activity• Linked Employee-Employer Data• Balance Sheet Data

- Both events have similar goals
 - Discuss and improve quality and comparability of novel indicators
 - High focus on cross-country comparability while being as granular as possible
 - Have intensive discussion on potential new and novel indicators which add real value
 - Data requirements for MICROPROD are partially in line with the planned data extension for the forthcoming CompNet's 7th data vintage

CompNet and MICROPROD are by nature deeply interrelated:

The scope of the ultimate respective objectives, as well as the strong overlaps in the driving factors, is shared by both NSIs as well as individual researchers and Institutions involved in the two respective initiatives.

Thanks for your attention

www.comp-net.org

www.microprod.eu