

CompNet

The Competitiveness Research Network

CompNet:

Where do we stand?

Filippo di Mauro (*)

IWH

Chairperson of CompNet

FINPRO4

Conference on Finance & Productivity

"Climate shocks, innovation, financing, and global adaptation"

Barcelona September 25-26, 2024

(*) professional assistance by Elena Sponga is gratefully acknowledged

SPECIAL THANKS!



EURO BANKING ASSOCIATION



esade



European
Investment Bank



EUROPEAN CENTRAL BANK



We appreciate your hosting and collaboration!

The future of European Competitiveness

Draghi Report
=
This conference

The future of European competitiveness

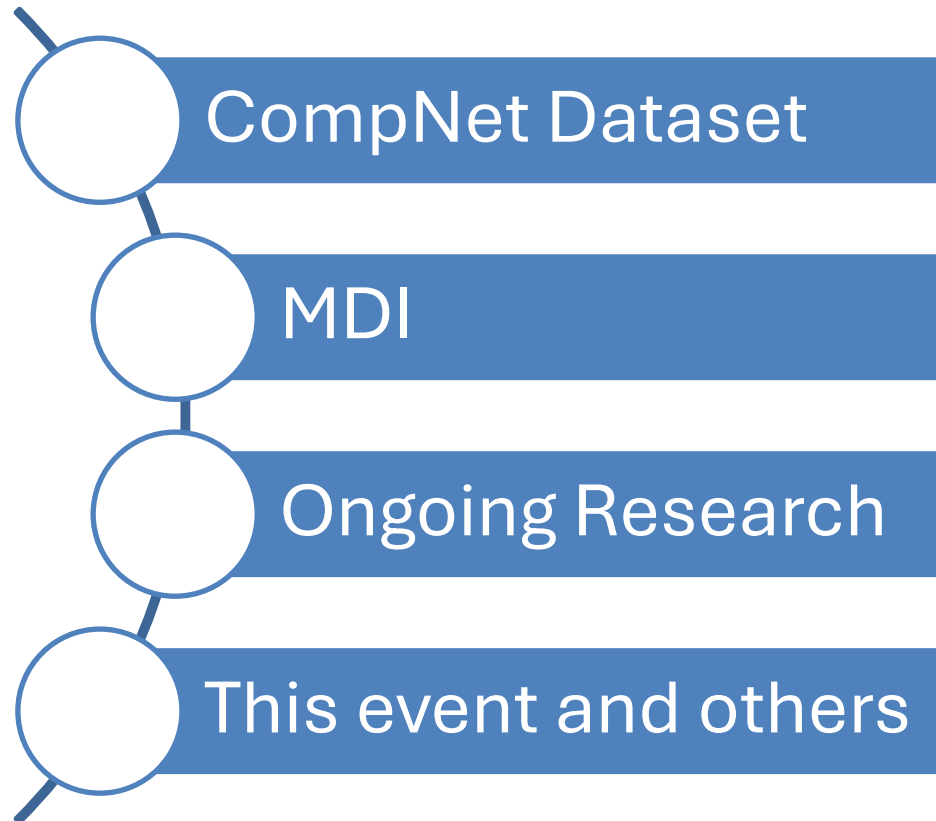
Productivity

Finance

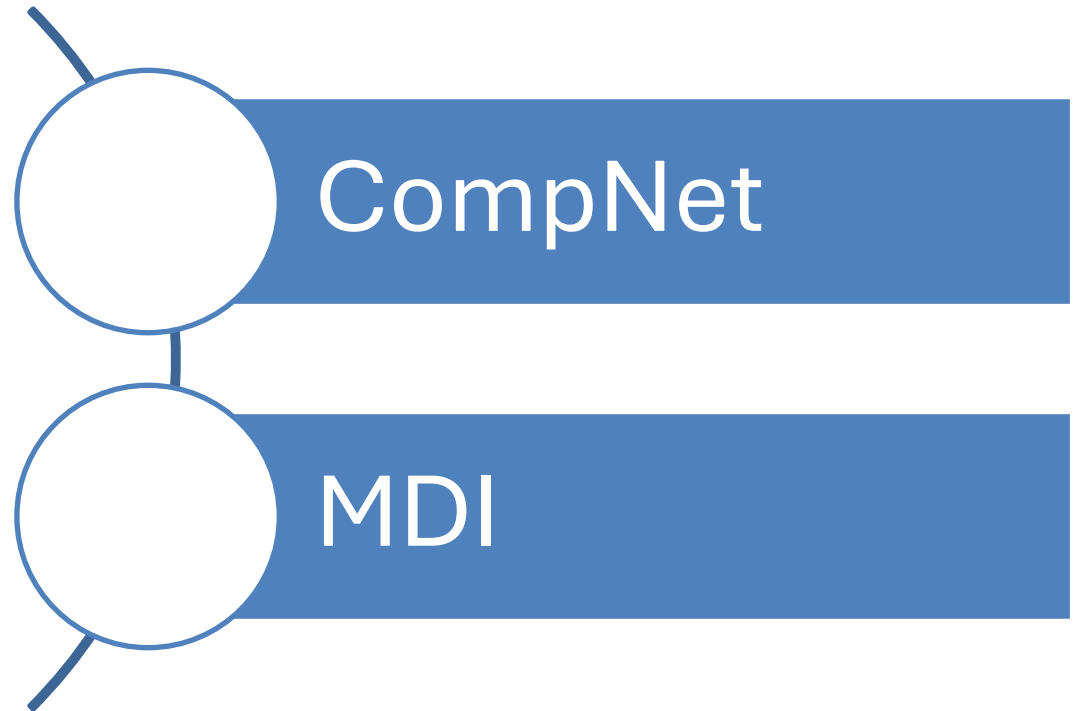
Climate

SEPTEMBER 2024

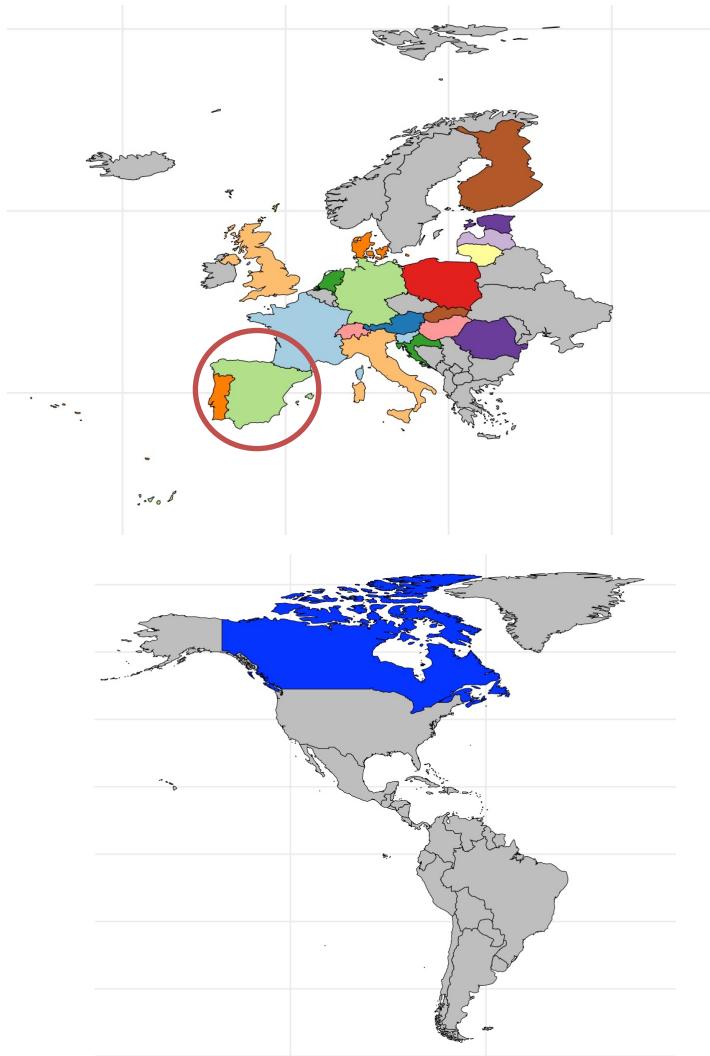
CompNet's contributions on Competitiveness



Two
datasets/tools



COMPNET DATASET



Overview

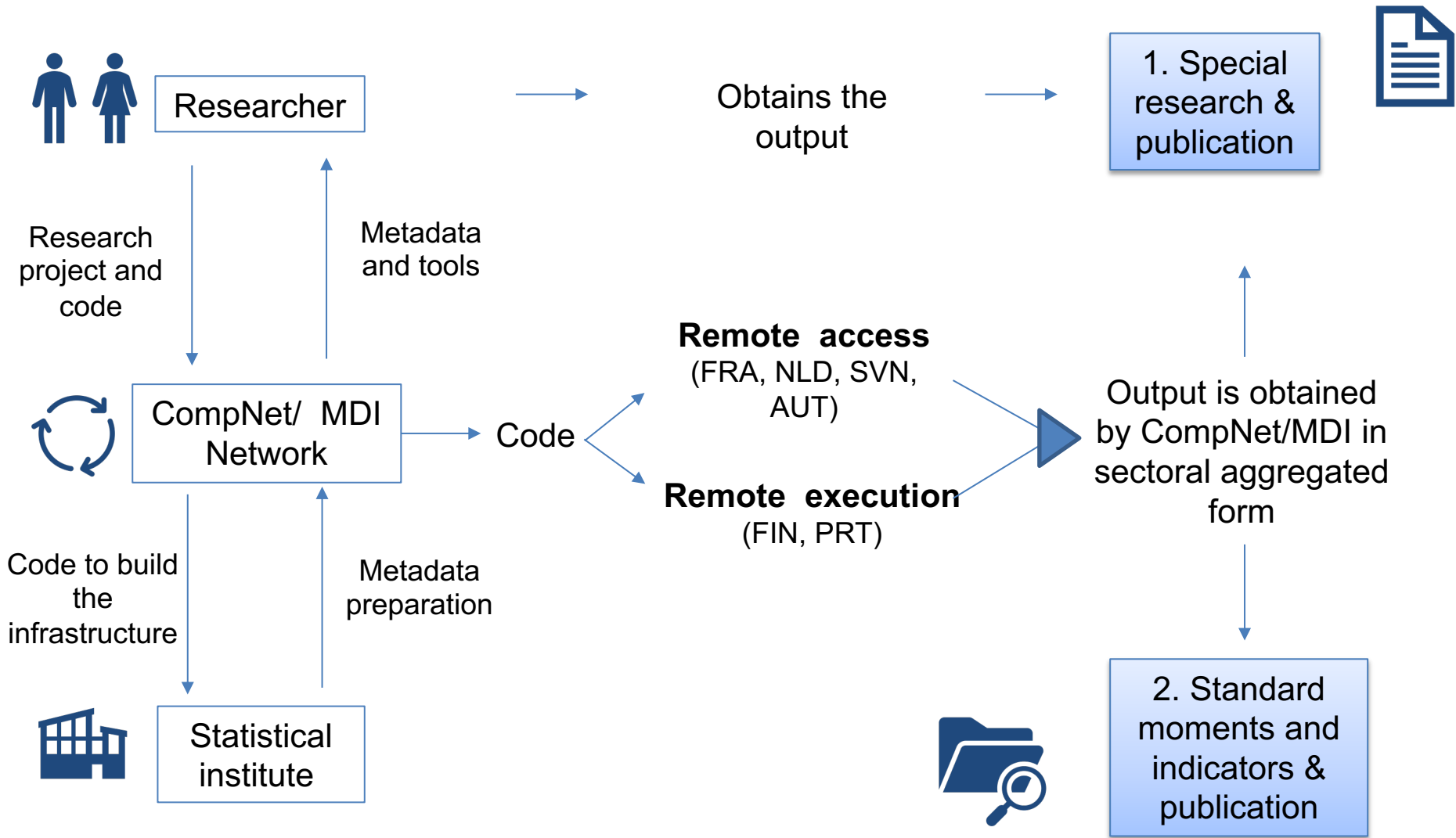
An unbalanced panel of productivity-related indicators is now available annually for 22 European countries, and 60 sectors from 1999 to 2020/21. Our data providers, including **Statistical Institutes, Central Banks, and Research Institutions**, use the same codes on their best existing national datasets.

Variables on 5 main topics

- Productivity
- Financial
- Trade
- Competition
- Labour

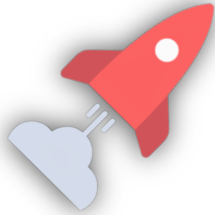
Aggregation Levels

- Country
- Macro-Sector
- Macro-Sector-Size-Class
- Industry 2-digits
- NUTS 2
- Technology



Aspect	CompNet Dataset	MDI
Purpose	Macro-level policy and academic analysis	Granular microdata platform for in-depth analysis
Data Types	Aggregated indicators (competitiveness, finance, labor, productivity, trade)	Detailed firm-level data (behavior, productivity drivers, economic indicators)
Coverage	23 Countries, 1999-2021	6 countries (France, Netherlands, Austria, Finland, Portugal, Slovenia)
Usage	Cross-country comparisons, macro-level analysis	Detailed firm-level analysis, policy-making support

Goal: Integrate CompNet projects into MDI for enhanced detail



Quarterly Launches:

- We are testing MDI tools across-countries
- Initiating concrete research projects



Increase country coverage:

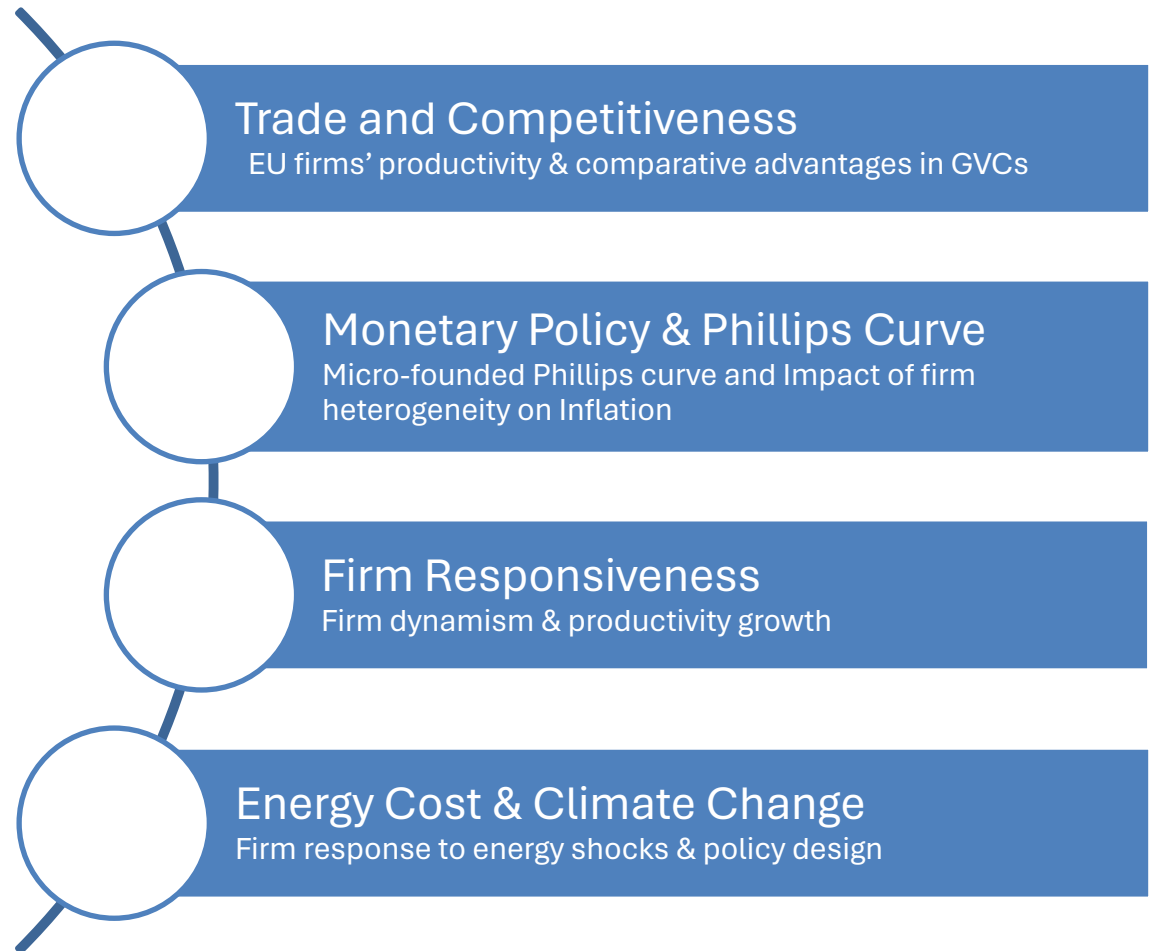
- From 6, soon...Germany and Italy
- In discussion with Spain, Greece, Malta, Canada and Japan.



Training:

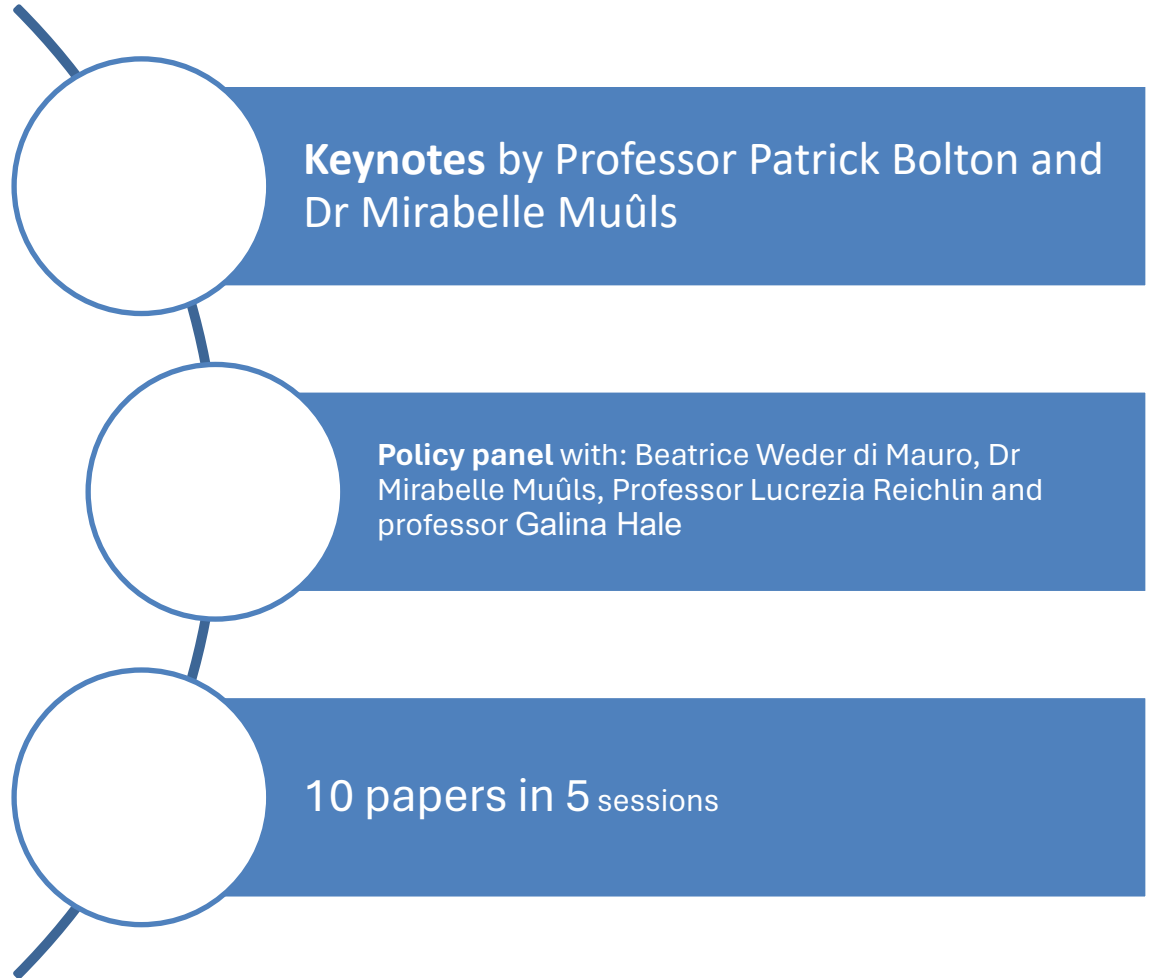
- live manual for MDI module writers and
- training slides for coding in R for MDI

Four Research Teams



➔ **Results to be presented in the poster sessions during this Conference**

This Conference



THANK YOU AND ENJOY THE
CONFERENCE !

Appendix

We have two Datasets and tools

- The **Traditional CompNet dataset**, now at its 9th Vintage: set of productivity indicators (firm-level based) for more than 20 EU countries and 60 sectors, available annually
- The **Micro-Data Infrastructure (MDI)**, a much more granular dataset, now already available for 8 countries (DK, FI, FR, NL, PT, NO, SE), which will allow researchers to run codes independently and directly on previously harmonised firm level datasets

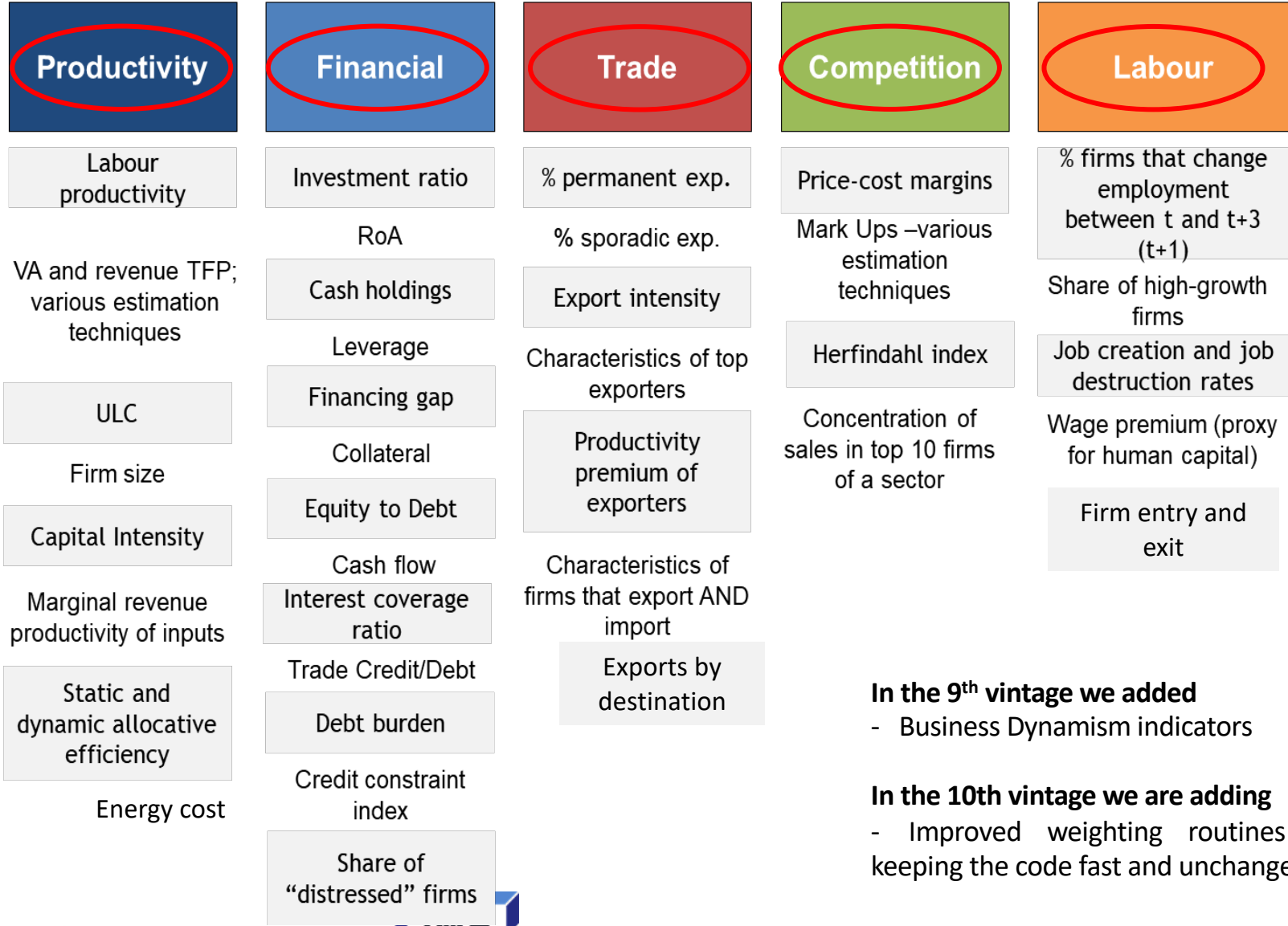
We have two datasets/tools: 1) The traditional CompNet Dataset

- Unbalanced panel of Productivity related indicators for 23 European countries and 60 sectors over 1999-2020/21, available annually
- Our data providers (**statistical institutes, central banks, and research institutions**) run the same codes on their best existing national datasets

Countries
Belgium, Croatia, Czech Republic, Denmark, Finland, France, Germany, Hungary, Italy, Lithuania, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland
New: Latvia, Malta, UK

Aggregation Levels
Country Macro-Sector Macro-Sector-Size-Class Industry 2-digits NUTS 2
New: Technology

Variables
Productivity
Financial
Trade
Competition
Labour

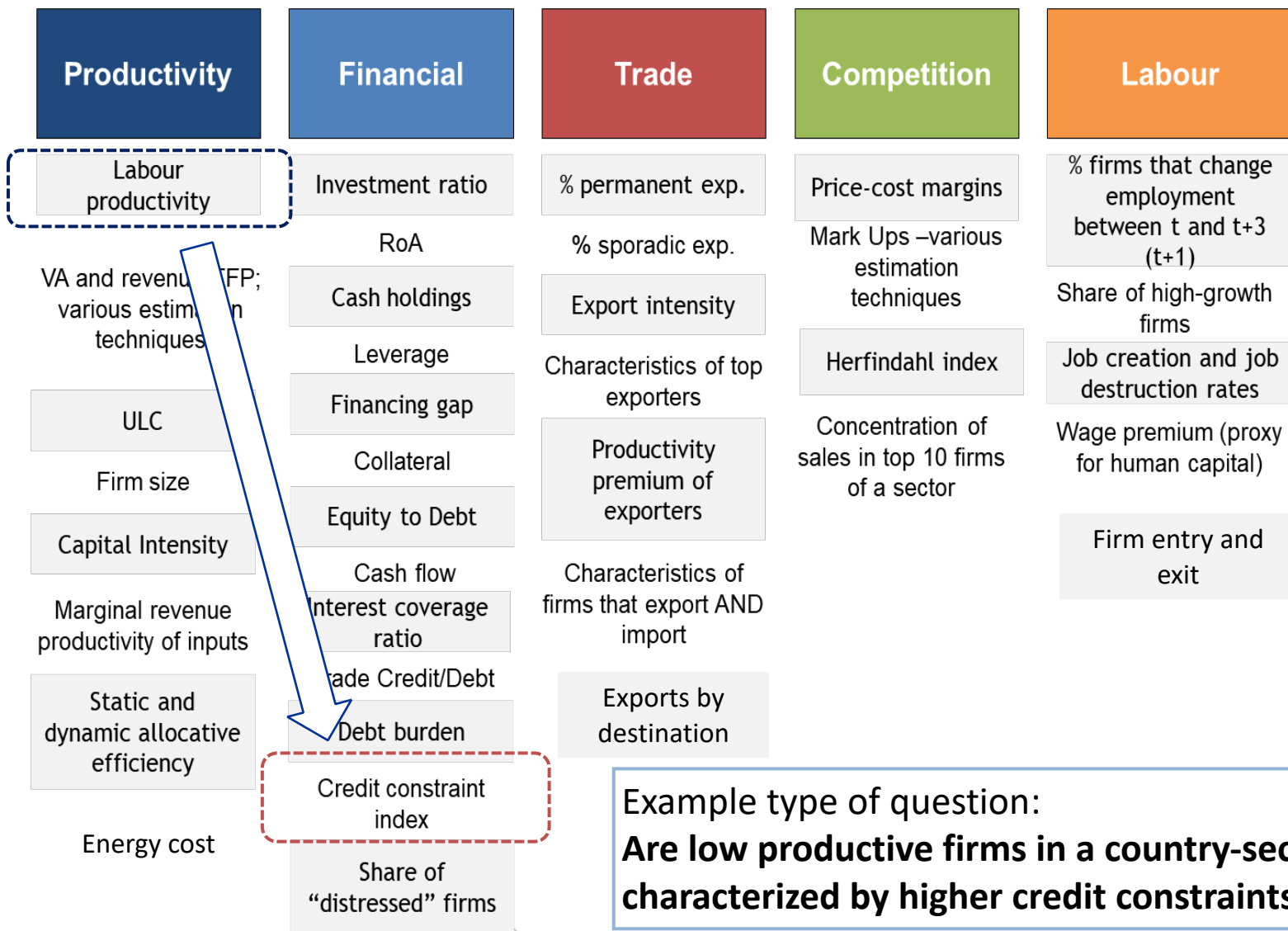


In the 9th vintage we added

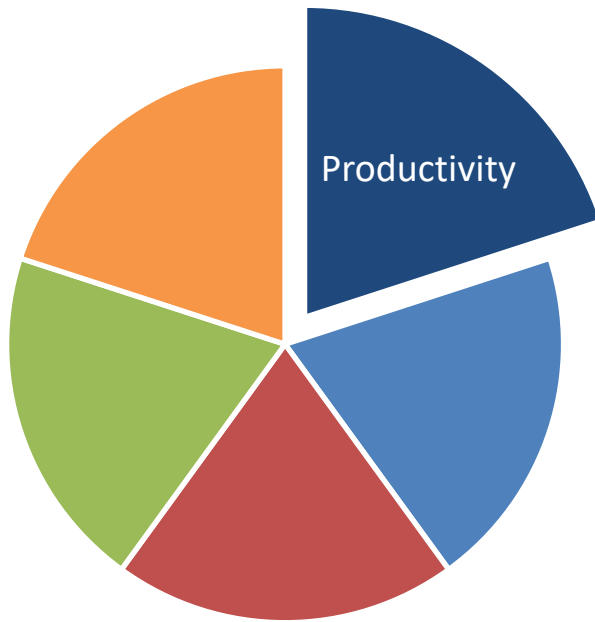
- Business Dynamism indicators

In the 10th vintage we are adding

- Improved weighting routines while keeping the code fast and unchanged



Example type of question:
Are low productive firms in a country-sector characterized by higher credit constraints?



- Labour Productivity
- Total factor productivity
- Firm Size
- ULC
- Capital Intensity
- Marginal revenue productivity of inputs
- Static and dynamic allocative efficiency



- Investment Ratio
- Return on Assets
- Cash Holdings
- Leverage
- Financial Gap
- Collateral
- Equity to Debt
- Cashflow
- Interest coverage ratio
- Trade Credit/Debit
- Debt Burden
- Credit Constraint Index
- Share of "distressed" firms



- Export Intensity
- Characteristics of top exporters
- Productivity of premium exporters
- Characteristics of firms that export and import
- % permanent expenditure
- % sporadic expenditure



Concentration of sales in top 10 firms of a sector

Mark-ups - various estimation techniques

Herfindahl Index

Price-cost margins



- Firm entry and exit
- Share of high-growth firms
- % firms that change employment between t and t+3 (t+1)
- Job creation and job destruction rates
- Wage premium (proxy for human capital)

The 10th Vintage – what's new

The CompNet 10th Vintage data collection is ongoing, with some counties' output already available.

Main **improvements**:

- An improved weighting routine that better represents small firm sizes in the CompNet all sample
- Additional years. This varies by country, but at least 1-2 more years are expected, offering a better inclusion of the pandemic period.
- Few additional indicators (e.g. bank debt)

Moreover, the codes include a series of **experimental files**, in collaboration with some key stakeholders, namely on:

- Start-up strategies, in collaboration with the EBRD
- Firm Growth
- Business Dynamism
- Zombie Growth Decomposition, in collaboration with the Central Bank of Slovakia

MDI motivation - Current status with many hurdles



To do research, a Researcher has to go through:

1. Research proposal
2. Data access procedure
3. NSI technical restrictions
4. Fixed costs of getting to know the data
5. Decisions on data handling (e.g., outliers treatment)
6. Programming the code



The NSI, for each research project has to:

1. Provide access procedures
2. Provide dedicated assistance
3. Provide Microdata research support
4. Do a disclosure analysis
5. Sometimes host researchers



The resulting disclosure-free output will be used in a publication, **virtually impossible to replicate in other countries** after many hurdles!

Some results (more in the poster's

Monetary Policy

Country coverage: France, Finland, Netherlands

Project: Heterogeneous Technology and the Phillips Curve

Results: more productive firms have flatter marginal cost curves and feature a lower price response to output shifts. As these firms typically absorb a greater share of demand shocks, the overall Phillips curve tends to be flatter.

Trade and Competitiveness

Country coverage: France, Finland, Netherlands

Project: Productivity Transmission within European Value Chains: Recent Evidence on Heterogeneous Firms and Disruptions'

Results: firms' productivity co-moves with that of their trade partners. During the COVID crisis, Finland and the Netherlands showed resilience, while France experienced a dampened response to RVC productivity shocks.

Some results (more in the poster's session!)

Firm Dynamics

Country coverage: Netherlands, France

Project: Firm responsiveness over the business cycle: a cross-country comparison

Results: the likelihood of firms responding to changing conditions varies by country. Firms in the Netherlands are more likely to react to extreme shocks. The analysis conducted for the Netherlands shows that the likelihood of firms adjusting capital and labour is lower during recessions.

Energy

Country coverage: France, Austria

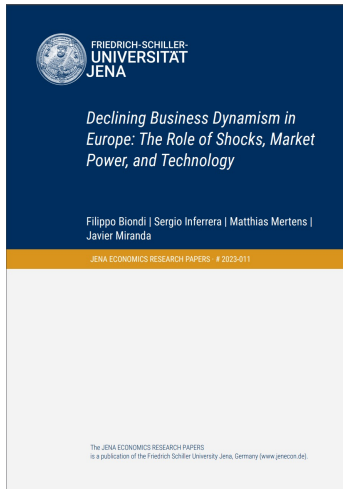
Project: Energy: Use, efficiency, and prices

Results: energy price increases boost efficiency, particularly in smaller firms, and larger firms tend to use less energy per unit of product.

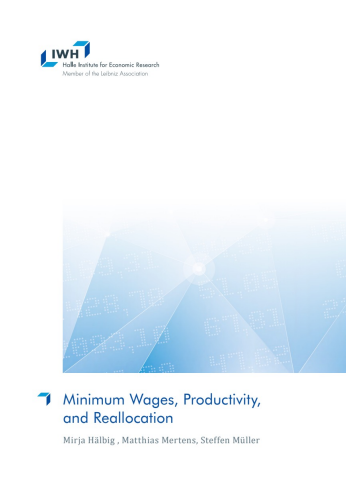
RESEARCH PUBLISHED & ONGOING



- **"Labor Market Power and Between-Firm Wage (In)Equality"** *, Journal of Industrial Organization, September 2023 (M. Mertens)
- **"Robot Hubs: The Skewed Distribution of Robots in U.S. Manufacturing"**. AEA, May 2023 (E. Brynjolfsson, C. Buffington, N. Goldschlag, J.F.Li, J. Miranda, R. Seamans)
- **"Robots and Female Employment in German Manufacturing"**. AEA, May 2023 (L. Deng, S.Müller, V. Plümpe, J. Stegmeier)
- **"QuickBooks Small Business Index: A New Employment Series for the US, Canada, and the UK"**. NBER Working Paper, June 2023 (U. Akcigit, R. Chhina, S. Cilasun, J. Miranda, E. Ocahverdi, N. Serrano-Velarde)



- **Declining Business Dynamism in Europe: The Role of Shocks, Market Power, and Technology".** September 2023 (F. Biondi, S. Inferrera, M. Mertens, J. Miranda).
- **"Do larger firms exert more market power? Markups and markdowns along the size distribution".** September 2023 (M. Mertens and B. Mottironi)
- **"Minimum Wages, Productivity and Reallocation".** April 2023 (Mirja Hälbig , Matthias Mertens, Steffen Müller)





Talking about competitiveness in Europe: Productivity not protection

Filippo Di Mauro, Marco Matani / 29 Sep 2023



Declining business dynamism in Europe: The role of shocks, market power, and responsiveness

Filippo Biondi, Sergio Inferrera, Matthias Mertens, Javier Miranda / 21 Mar 2024

- **Talking about competitiveness in Europe: Productivity not protection**
* VoxEU, 29 September 2023 (F. di Mauro, M. Matani)
- **Declining Business Dynamism in Europe: The Role of Shocks, Market Power, and Technology** *
VoxEU, 21 March 2024 (Filippo Biondi, Sergio Inferrera, Matthias Mertens, Javier Miranda)



The **12th CompNet Annual Conference**
(EC-Brussels 19-20 October 2023).



The **13th CompNet Annual Conference** (Central Bank of Malta, Malta 20-21 June 2024).

POLICY WORKSHOPS



1st TSI workshop, 24th February 2023, Lisbon



2nd TSI workshop, 23rd June 2023, Halle



3rd TSI workshop, 19th October 2023, Brussels



4th TSI workshop, 22-23 February 2024, Vienna

- **New Governance and Structural Changes:**
 - CompNet will integrate and be permanently staffed within IWH
- **CompNet dataset 10th Vintage:** ready in Fall 2024.
- **Solidify the MDI.....and promote its use for policy research**
- **Strengthening communication platforms** across data providers/ users
- Tailor-made **Training** on data use
- **Upcoming event:**
 - **TSI Workshop and Data Provider Forum** – Amsterdam, hosted by the Vrije Universiteit Amsterdam, September 18-19, 2024
 - **Annual Conference CompNet 2025.** Vilnius, hosted by the Central Bank of Lithuania, September 21-22, 2025

SPECIAL MENTION AND THANKS!



**Funded by
the European Union**

Funding by the European Union via the Technical
Support Instrument

CompNet Covers 22 European Countries

Remote Access

Granular Data

Detailed firm-level data

Now includes Canada

Cross-country comparisons

60 Sectors

Business Dynamism Indicators

CompNet
Productivity at its heart

10th Vintage Coming Out this Fall

International Coverage

MDI in 6 countries

Technical Support Instrument (TSI)

Micro-Data Infrastructure

Growing Network

Harmonized Indicators

New and exciting research projects

Digital Engagement

Dynamic Dataset