

Firm Productivity Report

CompNet 10th Vintage

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CompNet

The Competitiveness Research Network



CompNet Dataset 10th Vintage

Country	All firms	20e	Time Span
Croatia	X	X	2002–2023
Czech Republic	X	X	2005–2022
Denmark	X	X	2001–2022
France		X	1995–2021
Germany		X	2004–2020
Hungary	X	X	2003–2022
Latvia	X	X	2006–2021
Lithuania	X	X	2000–2022

Country	All firms	20e	Time Span
Malta	X	X	2010–2022
Netherlands	X	X	2007–2022
Poland		X	2002–2022
Portugal	X	X	2004–2022
Romania		X	2005–2023
Slovakia		X	2000–2022
Slovenia	X	X	2002–2023
Spain	X	X	2008–2022
Switzerland	X	X	2009–2022

Austria, Canada, Finland, Greece, Italy, Japan, South Korea, New Zealand, United Kingdom – in progress

CompNet Dataset Overview:

- **Micro-aggregated indicators at various aggregation levels**
 - Country
 - Macro-sector
 - Macro-sector size
 - Industry
 - Region (NUTS2)
 - Technology/knowledge
 - Age

CompNet Dataset Overview:

- **Micro-aggregated indicators at various aggregation levels**
- **For each level of aggregation, the dataset contains ~ 600 variables, grouped into six categories**
 - Finance
 - Productivity
 - Labour
 - Competition
 - Trade
 - Others

CompNet Dataset Overview:

- Micro-aggregated indicators at various aggregation levels
- For each level of aggregation, the dataset contains ~ 600 variables, grouped into six categories
- For each variable, the dataset provides
 - Unconditional moments of the distribution
 - Decompositions
 - Joint distributions

Europe's Post-Pandemic Challenge:

- Navigating post-pandemic challenges amidst continuing global economic disruptions
- Enhancing productivity remains crucial to maintaining a competitive edge (cf. Draghi report)
- Policymakers and economists must closely examine firm- and sector-specific factors to:
 - Pinpoint vulnerabilities,
 - Identify sources of resilience
- These insights enable the creation of policies that effectively drive productivity growth

2025 CompNet Flagship Firm Productivity Report:

- Uses the latest vintage of our micro-aggregated dataset
- Offers insights into the crisis impact on the European economy across key dimensions:
 - Firm-level productivity,
 - Competitiveness,
 - Potential output,
 - Reallocation of resources,
 - Fluctuating energy prices,
 - Tighter credit constraints,
 - Examines market concentration trends and their implications.

Why the CompNet Dataset?

- Micro-aggregated with high-quality firm-level data that improves macroeconomic analysis
- Uncovers heterogeneity across and within sectors to analyze the economy-wide impact of shocks
- Harmonized nature allows comparison of TFP growth and its drivers across European economies
- Especially valuable in contexts where differing policies led to widely varying economic outcomes

Key Takeaways:

- **Urgent need for reform:** Early 2025 disruptions demand strengthening Europe's economic fundamentals
- **Key focus areas:** Analysis spans productivity convergence, job market dynamism, and firm concentration
- **Divergent recovery & resilience:** While some firms, sectors, and countries have shown robust resilience — with Eastern European countries leading — the recovery has been uneven
- **Policy implications:** Understanding these differences informs current European policymaking decisions and strategies to build resilience for future crises

Productivity Developments

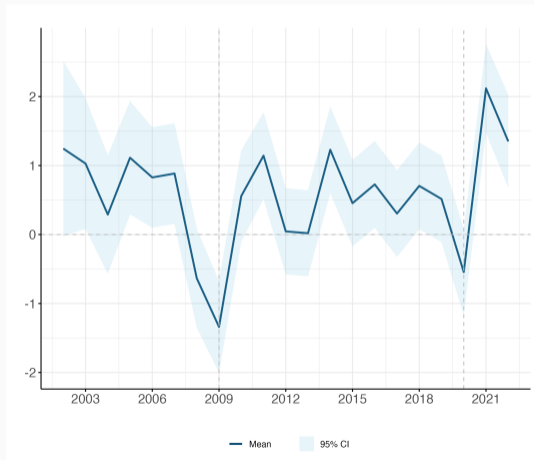


Figure 1: TFP Growth Trend Across Europe

- **Strong Recovery:** Strong recovery since the sharp drop of the pandemic; significant rebound from gains from restructuring
- **Digital Shift:** Accelerated adoption of technology and remote work boosted productivity and efficiency
- **Supply Adjustments:** Post-COVID restructuring improved resilience, reduced costs, and optimized supply chains

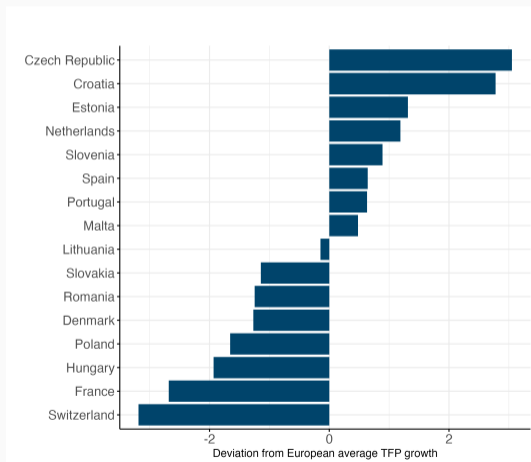


Figure 2: Deviation from 2021 average

- **Recovery Dynamics:** Economic recovery unfolding at two distinct speeds; the 2021 European average growth rate was $\sim 2.15\%$
- **Front Runners:** Czech Republic, Croatia, Estonia, and Slovenia – and tourism-dependent Malta and Spain exhibiting steady recoveries
- **Trailing Group:** France, Hungary, and Denmark experienced sluggish TFP growth – sectoral concentration, varying government intervention, and pre-existing economic vulnerabilities

The Role of Technology

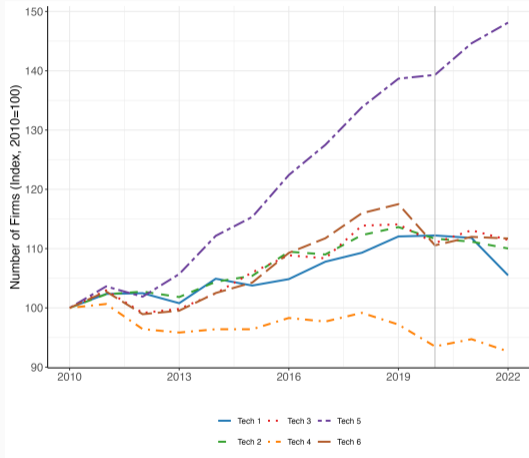


Figure 3: Number of Firms by Technology Intensity

- **Historical & Recent Trends:** Traditionally, tech advancements boosted labour productivity in manufacturing, rapid digital innovations now drive growth in knowledge-intensive services
- **Firm Number Growth:** Substantial growth in high-knowledge service sectors (Tech 5) versus moderate growth in high-technology manufacturing sectors (Tech 1).
- **Industry Implications:** Reflects shifting industry dynamics, indicating that the digital revolution will continue to reshape productivity patterns

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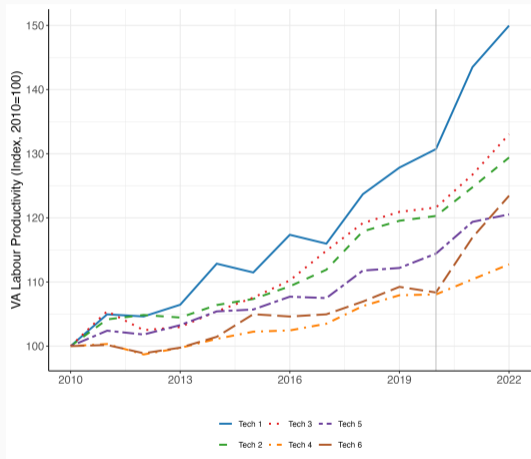


Figure 4: Value added Labour Productivity by Technology Intensity

- **Skewed Gains:** High tech and knowledge intensity industry drive productivity gains, widening gap since pandemic
- **Digitalization of Services:** Less knowledge-intensive services notably enhanced labour productivity through digital tools and automation
- **Policy Implications:** May lead to concentrated resources and opportunities, technology diffusion and strengthening resilience crucial

Productivity Convergence

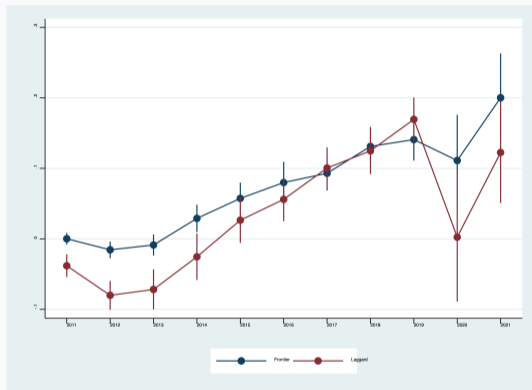
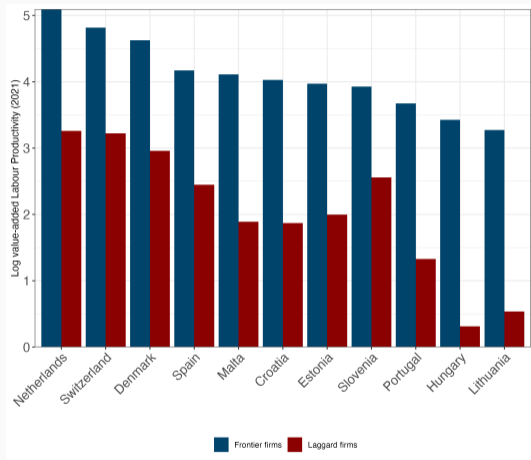


Figure 5: Frontier vs Laggard Firms Predicted Labour Productivity

- **Trend Peak:** Prior to the pandemic, the productivity gap peaked in 2012 and then narrowed between 2015 and 2018
- **COVID Impact:** The onset of COVID-19 in 2020 reversed the trend, laggard firms experienced a steeper decline in productivity
- **Post-COVID Recovery:** Laggard firms aren't stuck, recovery is on the path to closing the gap to frontier firms again

Productivity Convergence



- **Cross-Country Variations:** Marked cross-country differences indicates technological adoption, managerial practices, and policy support significantly influence firm performance

Figure 5: Labour Productivity Gap in 2021 by Country

Productivity Convergence

Country	Labour			
	Productivity	Value-added	Real Wage	Size
Croatia	3.29	79.60	2.44	3.79
Denmark	2.17	41.31	3.83	2.56
Estonia	3.14	12.55	3.15	0.97
Hungary	-39	155.17	4.53	3.60
Lithuania	8.20	16.81	1.94	0.80
Malta	4.60	56.91	3.86	1.80
Netherlands	2.25	14.64	4.98	0.50
Portugal	6.67	88.48	3.42	3.46
Slovenia	2.26	42.45	1.95	4.97
Spain	2.64	89.46	3.09	3.00
Switzerland	1.93	40.90	3.78	2.45
Total	3.21	33.44	3.56	1.69

- **Definitions:** Frontier firms are the top 10% of the log value-added labour productivity distribution in each sector-year, laggard firms are the bottom 10%
- **Cell Values:** Each cell indicates the ratio of mean firm characteristics of frontier firms compared to laggard firms for 2021
- **Data Note:** Labour productivity refers to log value-added labour productivity. The large negative value for Hungary reflects the concentration of very low productivity firms among laggards.

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- **Diffusion Impact:** Slow technology diffusion in some countries widens Europe's productivity gap.
- **Capability Gap:** Laggard firms lack the human capital, advanced technology, and global links needed to innovate.
- **Policy Response:** Strengthening absorptive capacity through boosting human and intangible capital, expanding international exposure, and easing financial constraints can help narrow the divide.

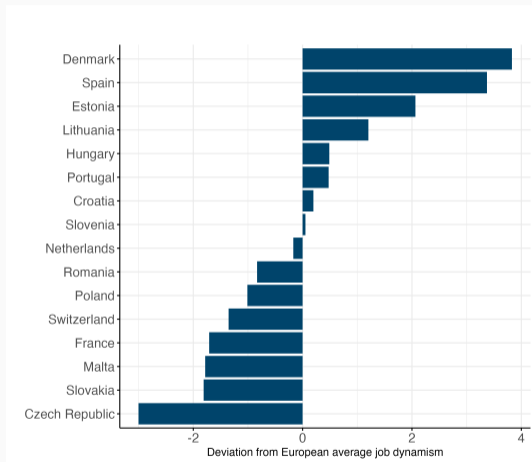


Figure 6: Deviation per Country from European Average for Net Job Creation Rates, 2021

- **Dynamic Influence:** Productivity differences stem also from job creation and destruction, as shown by deviations from a 1.73% European average in 2021
- **Entrepreneurial Boost:** In Denmark and Spain post-pandemic net job creation surged, suggesting new ventures and expansions are outpacing business closures while Croatia and Slovakia displayed relatively lower net job creation rates, indicating less vigorous entry and expansion, possibly due to transitional phases

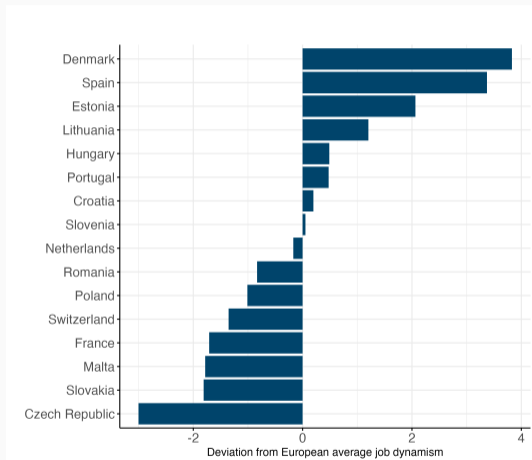
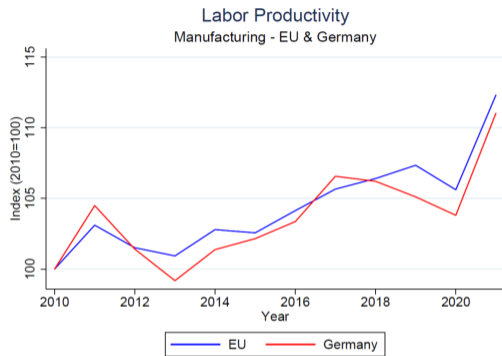
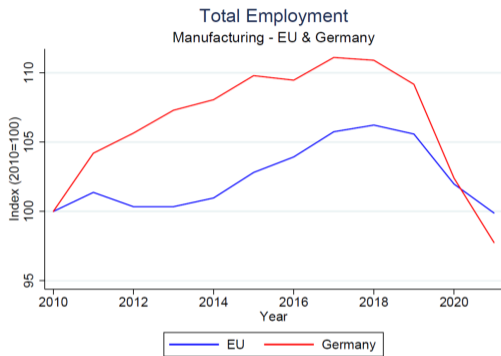


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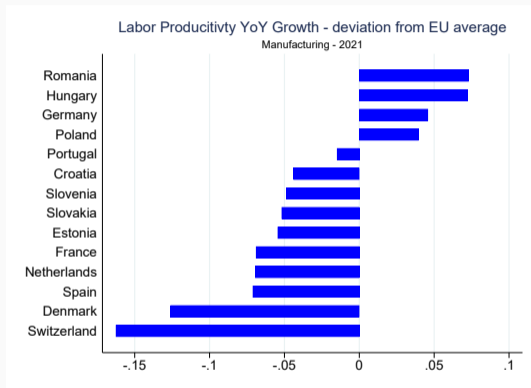
- **Market Dynamics:** Dynamic labour markets accelerate innovation diffusion and help narrow productivity gaps, whereas stable job flows preserve entrenched structures – highlighting the need for balanced policy interventions

Examining the Manufacturing Sector in Europe (Hoang Duy)



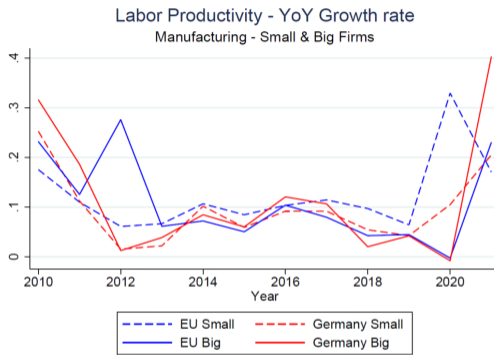
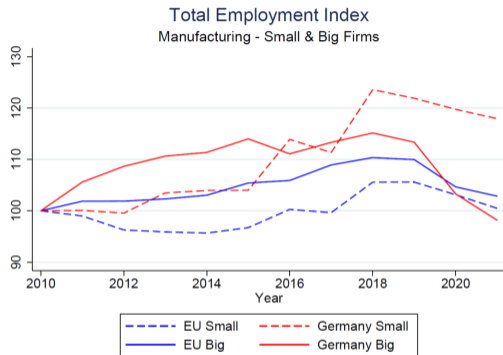
- **De-Industrialization:** Employment in Europe slowed from 2018; in Germany, 2021 employment fell below 2010 levels.
- **Productivity Recovery:** Labour productivity rebounded in 2021, with strong growth observed in both Germany and the EU.

Examining the Manufacturing Sector in Europe (Hoang Duy)



- **Diverse Contributions:** Romania, Hungary, Germany, and Poland recorded above-average growth, while Switzerland lagged by over 15%.
- **Uniform Trends:** Most European countries' productivity growth deviated by only around 5% from the EU average.

Examining the Manufacturing Sector in Europe (Hoang Duy)



- **Firm-Size Trends:** Employment declined in both big and small firms from 2018, with most returning to 2010 levels by 2021 (small German firms remained stable).
- **Post-Covid Rebound:** Big firms, especially in Germany, rebounded in 2021 with high growth (up to 40%), driving overall productivity recovery.

- **Dataset Launch:** Introduces the 10th vintage of the CompNet dataset and the new Micro Data Infrastructure (MDI) tool, offering platforms for cross-country research at different levels of granularity
- **Economic Landscape:** Analysis of Europe's post-COVID environment reveals a critical junction marked by significant divergences in productivity growth, frontier and laggard firm behaviours, and job creation rates – with Eastern European nations now leading growth while some Western counterparts lag; some evidence of deindustrialization and sectoral shift away from manufacturing across Europe
- **Strategic Vision:** Need for embracing differentiated but coordinated policy approaches – narrowing productivity gaps and enhancing global competitiveness while building resilience against future shocks

Thank You!

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