



Fostering external dimension and productivity in Eastern Europe: Insights from firm level analysis

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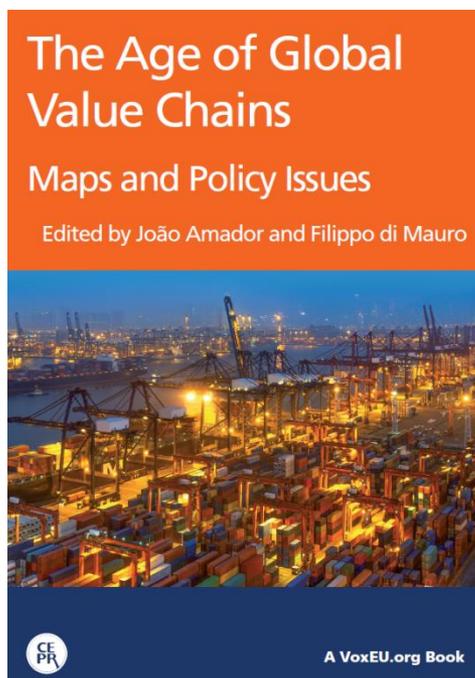
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Will draw from two main sources



- Since 2012 the Competitiveness Research Network ([CompNet](#)) collects firm-level based data to study productivity-competitiveness drivers
- A number of EU Eastern European central banks teams participate (including Poland, Czech Republic, Romania, Croatia, Slovakia, Latvia)

- A [Vox EU E-book](#) recently released – with CompNet contributions – on mapping EU value chains

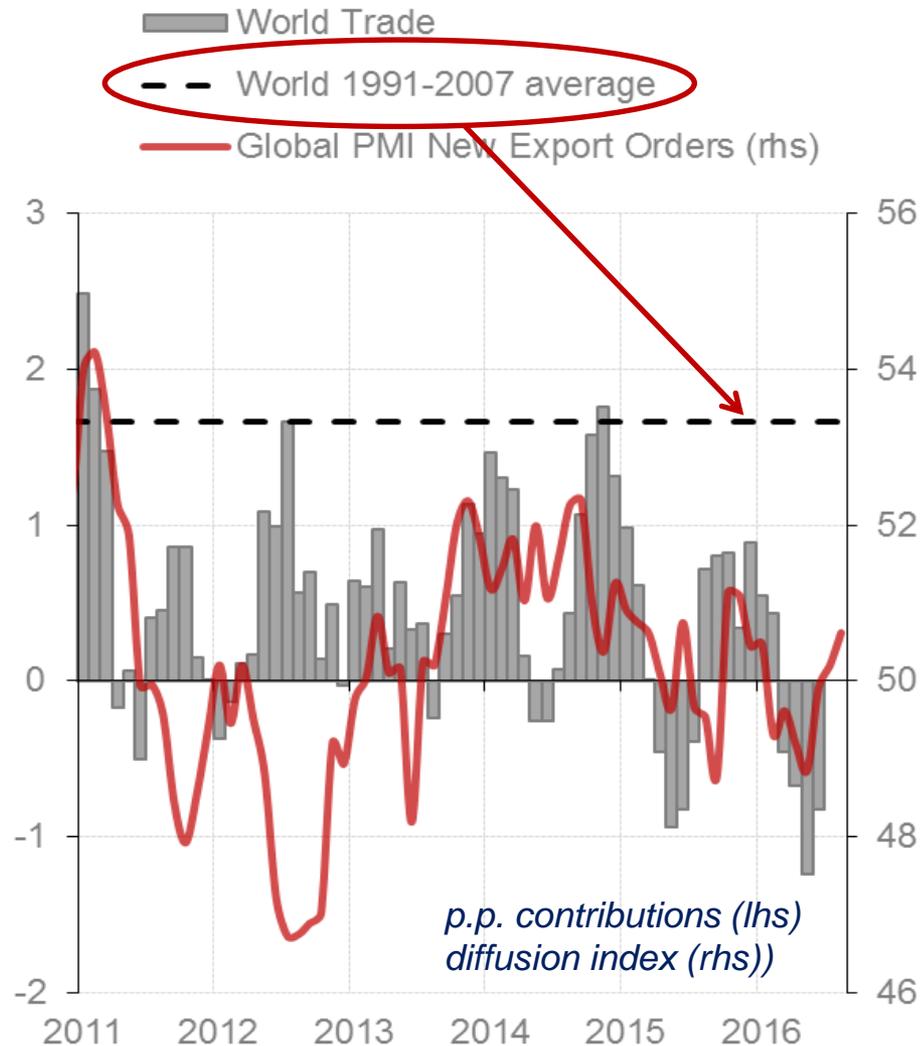


Main ideas

- Will be more "methodological" than "normative", i.e. suggesting better diagnostic before attempting therapies
- The global trade bonanza of the 2000 decade appears to be over
- Need to better understand supply side growth drivers
- Will draw from the CompNet firm level based dataset
- Two results of an application to Poland
 - **Size and export concentration matters to achieve higher productivity....**
 - **Resource reallocation from low to highest productive firm is also key...Has structural reform gone far enough?**

World Trade – Declining and expected to remain weak

Global manufacturing trade growth much lower than 1991-2007



- 3m-on-3m percentage change rate
- Even if (probably) recovering, sensible gap in growth with pre-crisis average

Source: Markit.

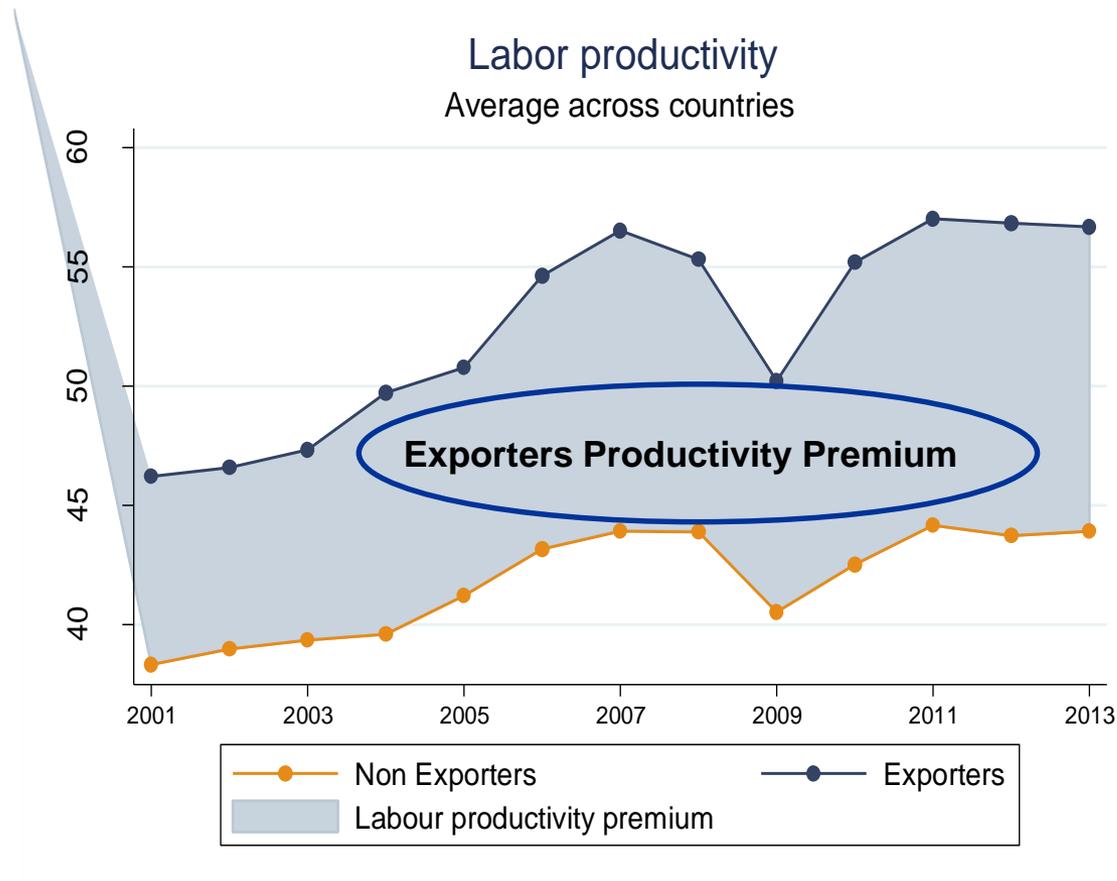
Note: Latest data refers to August 2016 for PMI and to June 2016 for world trade.

How can firms level information help designing better policies?

- 1)by telling us to what extent and under what conditions exporters are "champions"
- 2) Let's have a look at 4 stylised facts related to exports coming from the **CompNet** database including some 20 EU countries
- 3) and one Eastern European country case, Poland

1. Export status and productivity are strictly related

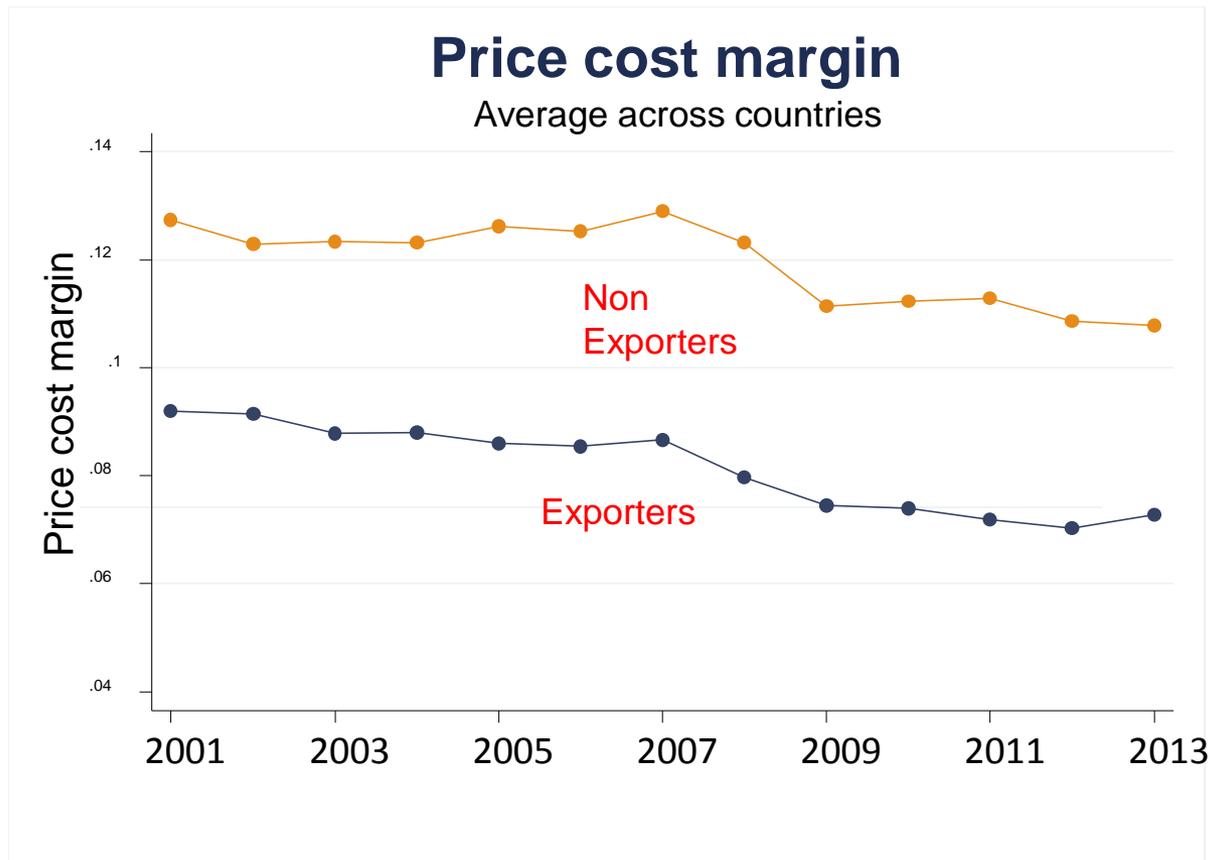
- Aggregate export performance largely driven by most productive firms
- Exporters are persistently more productive (about +20%) (e.g. Export premium)



Source: CompNet and author's own calculation

2. Exporters generally face a higher degree of competition

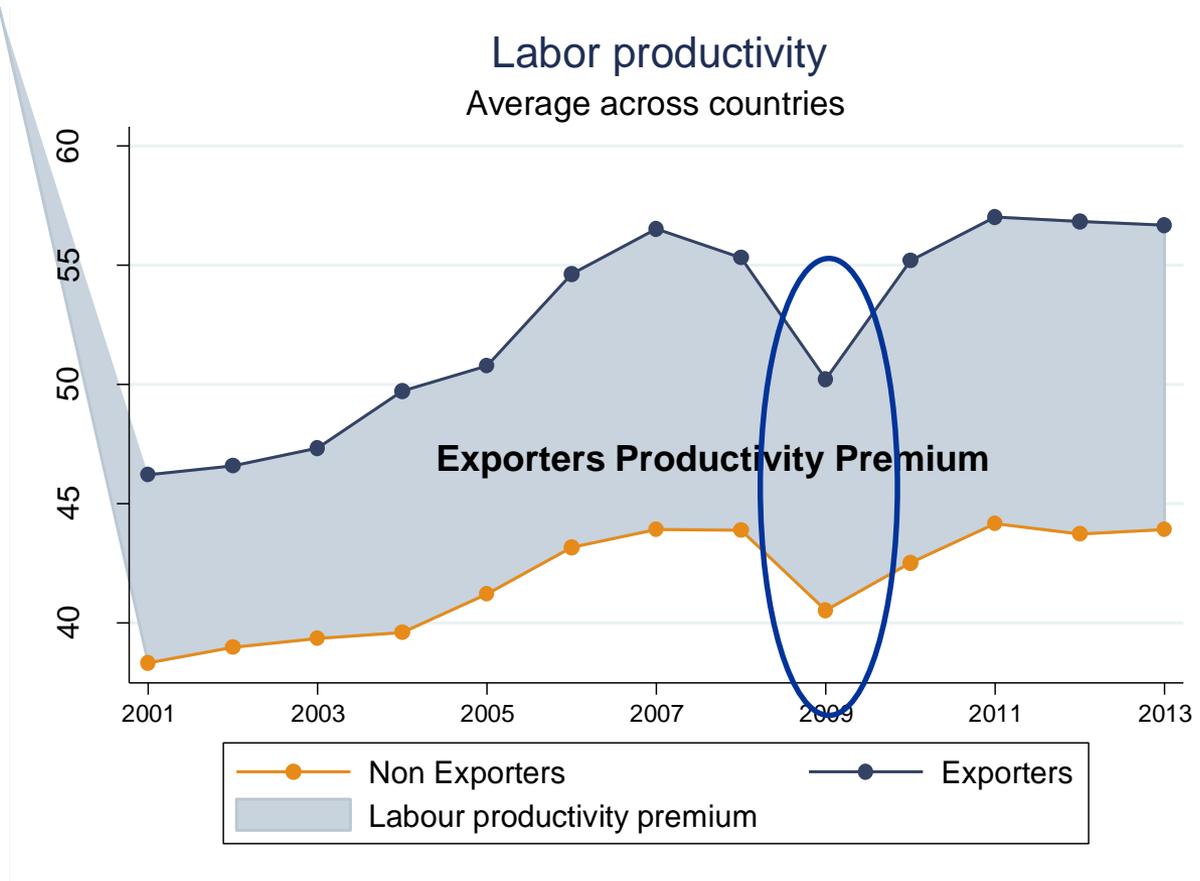
- Price cost margins are LOWER for exporters and have been decreasing over the last decade



Source: CompNet and author's own calculation

3. Exporters are more sensitive to international shocks

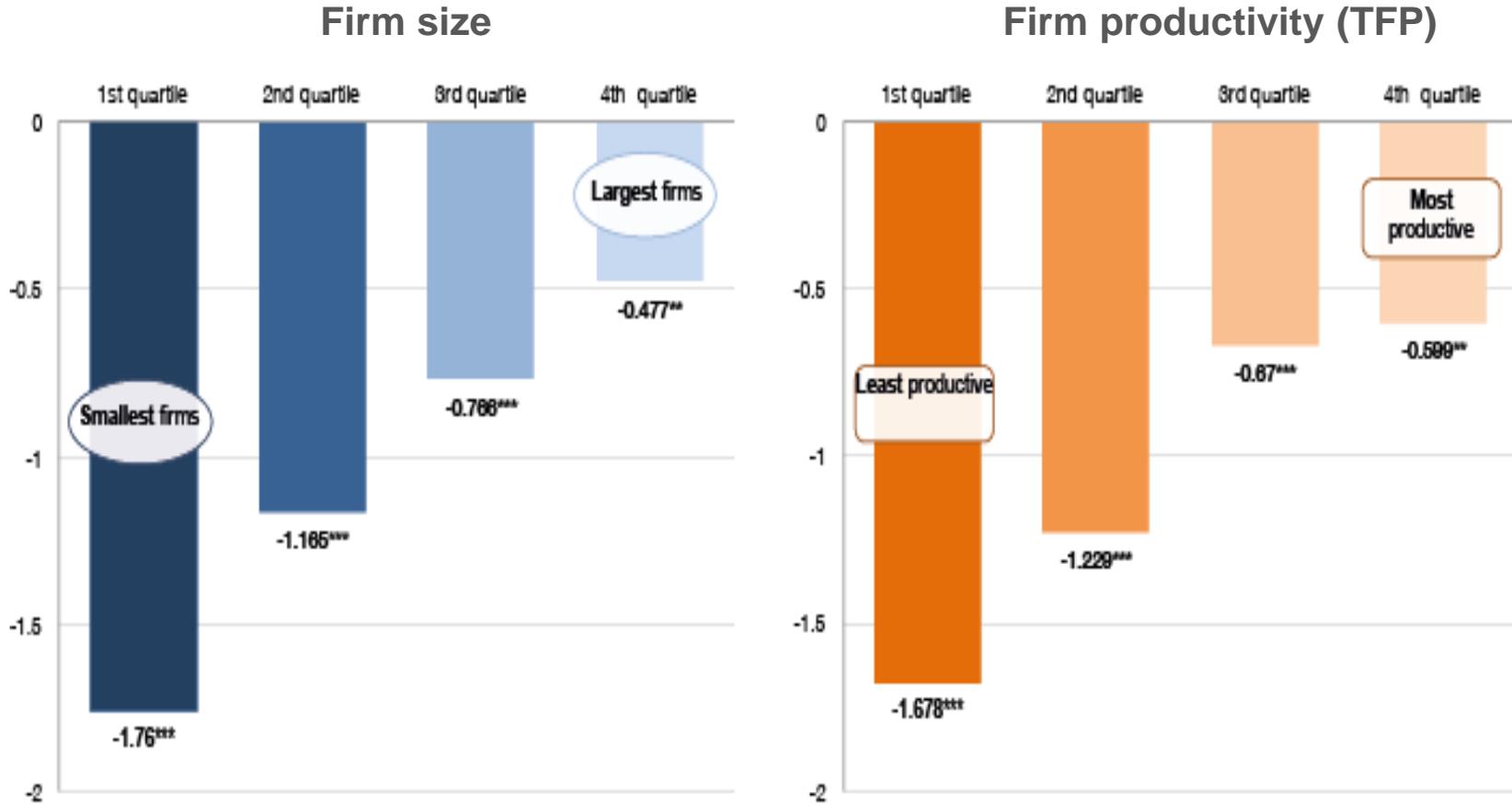
- Large (exporting) firms have important macro effects
- During the crisis, productivity dropped more for exporters



Source: CompNet and author's own calculation

4. Exchange rate sensitiveness varies with size and productivity

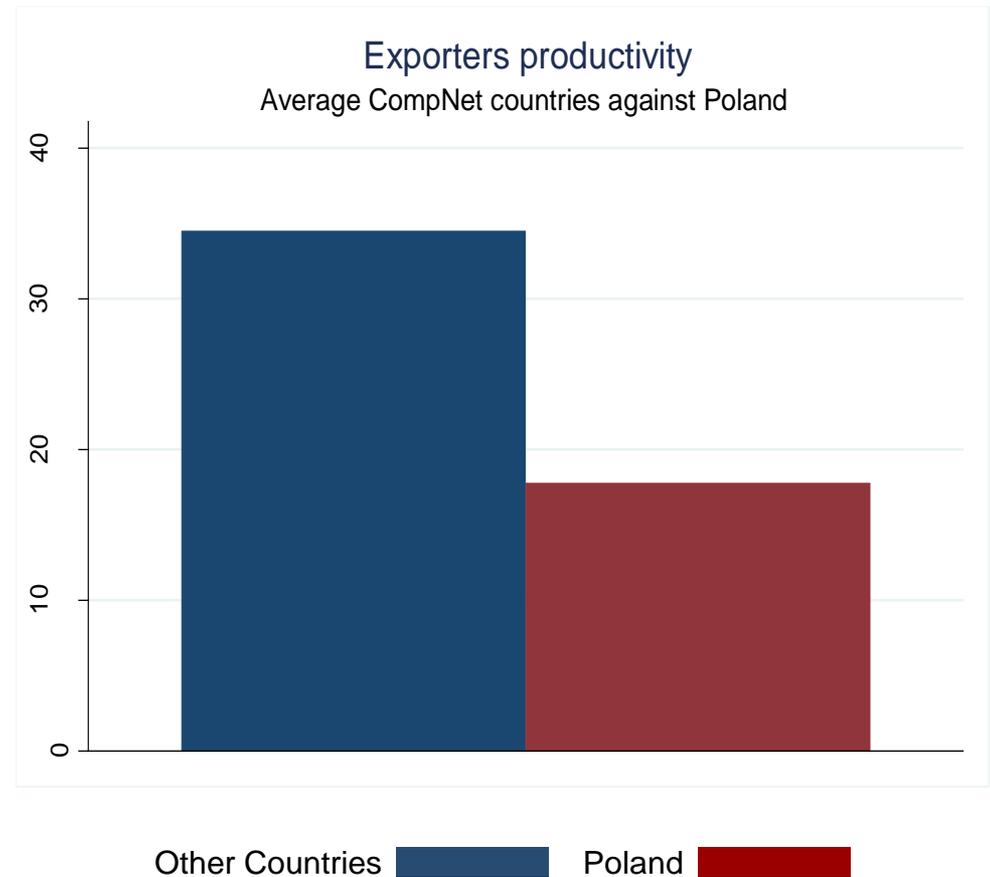
- The larger and the more productive is the firm, the less FX matters



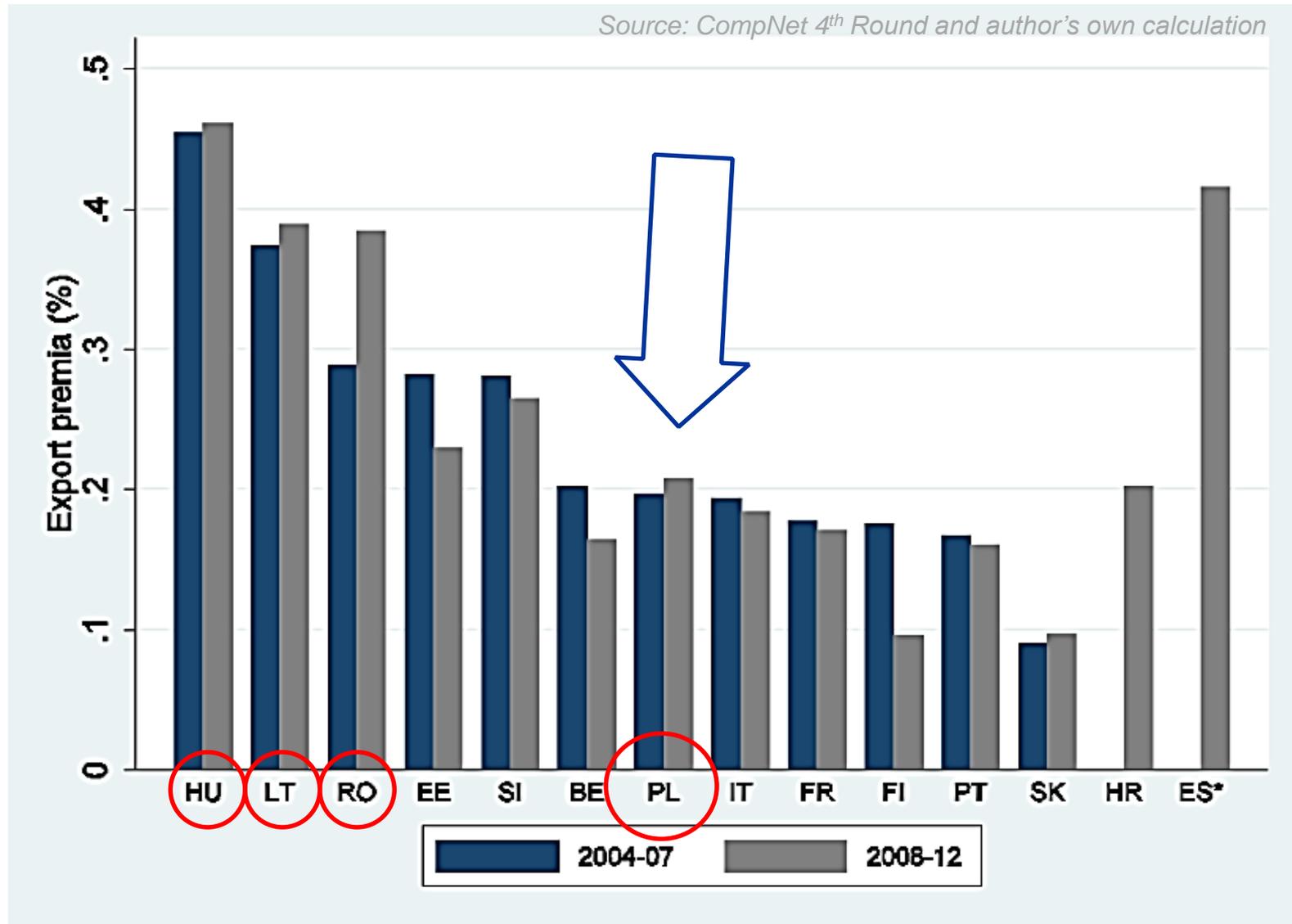
An application to Eastern Europe

Poland appears to suffer from an export productivity gap

- Polish exporters report a **lower labour productivity** with respect to the average of the 16 CompNet EU countries (5th vintage)
- What could be the reason for that?
- How they could catch up with other EU countries?

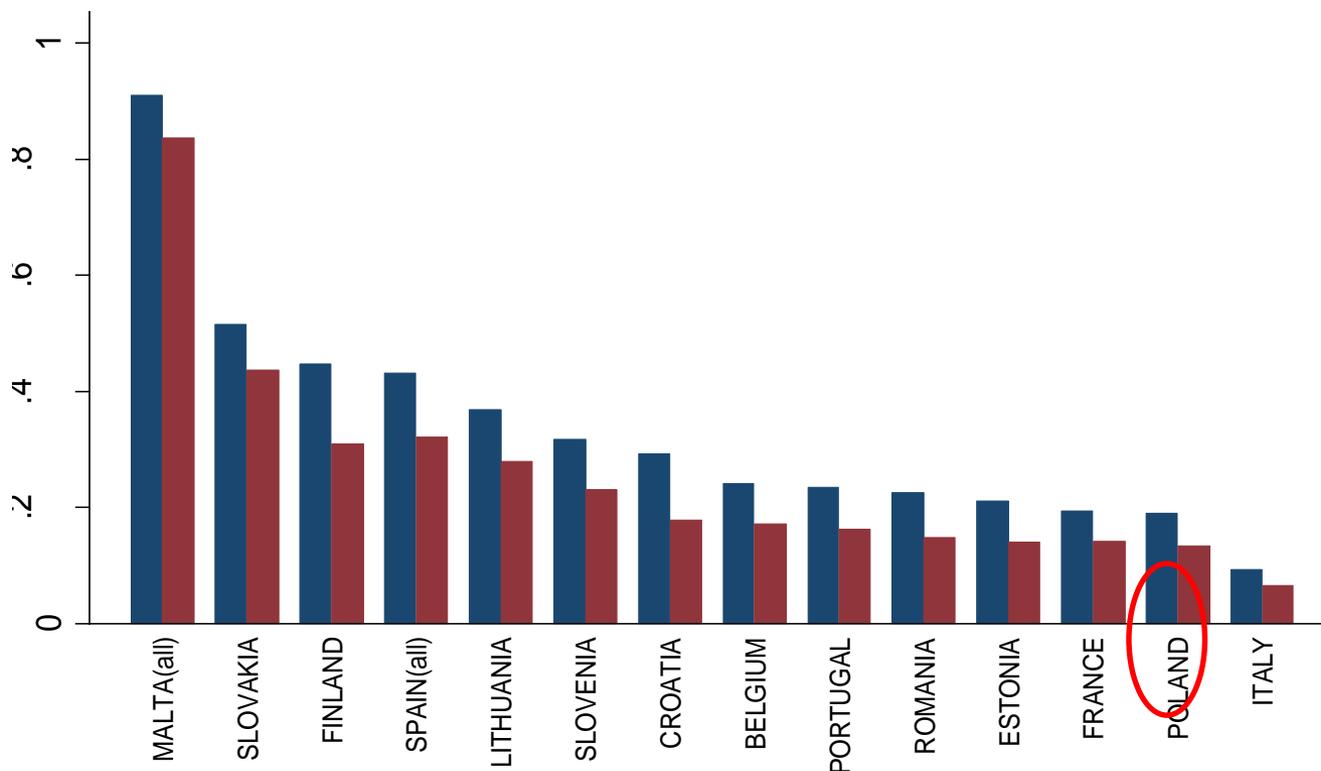


...Poland export premium is also lower than for most EU-EE countries



...Poland exports appear to be less highly concentrated than on average

- Top-10 exporters in the WHOLE SAMPLE account for $\approx 25\%$ of national exports
- Export concentration is rather high for some EU-EE countries - rather low for Poland
- Can this be a factor of weakness?



Source: Berthou et al. (2015)

Can this be related to frictions in resource reallocation?

- 1) Measurement of resources reallocation**
- 2) Cross EU-EE country evidence**

Resource allocation indicator – the OP Gap

- We use a standard decomposition of Productivity, as proposed by Olley and Pakes (OP Gap)
- The OP Gap is the within-sector covariance between relative firms' size and productivity

$$\Omega_t = \bar{\Omega}_t + \sum_i \Delta s_{it} \Delta \omega_{it}$$

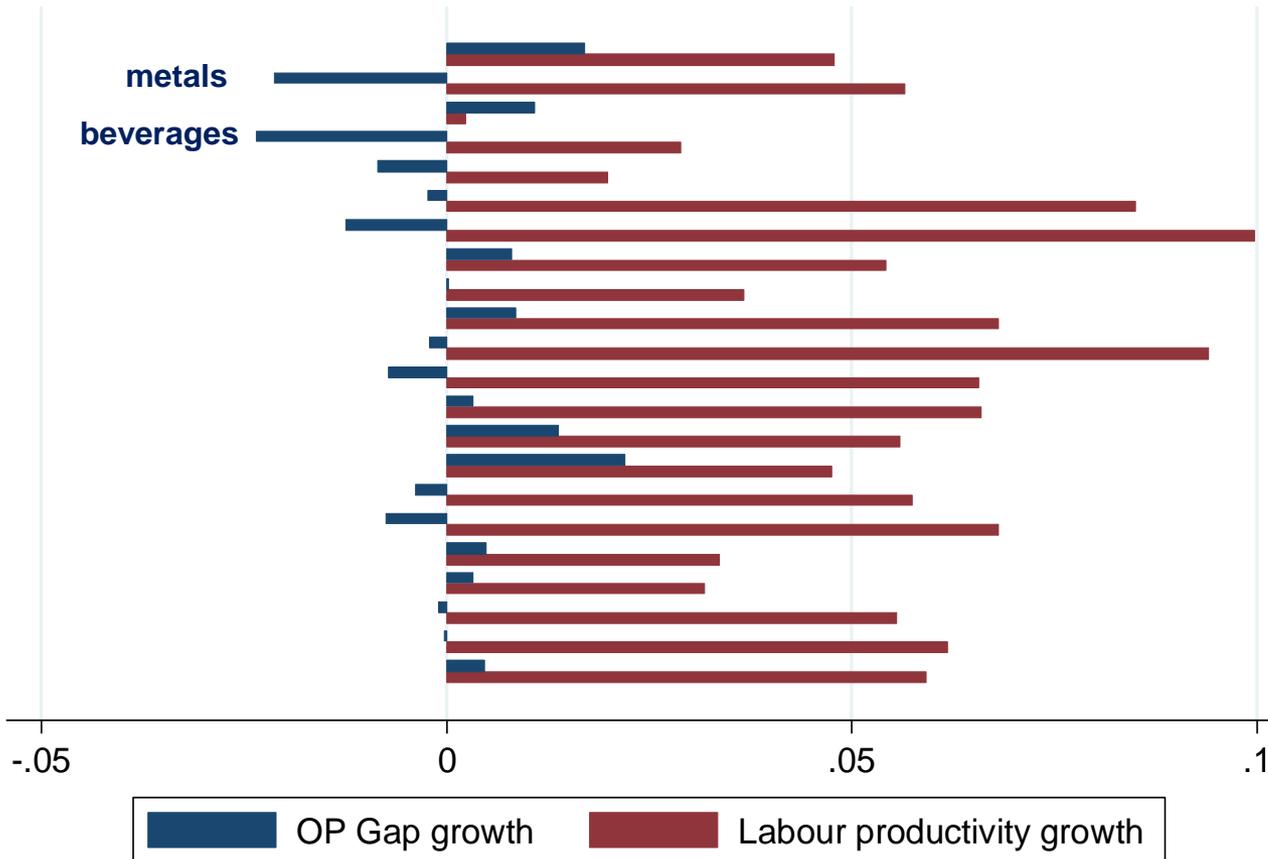
where:

$\bar{\Omega}_t$ is the unweighted average productivity; $\Delta s_{it} = s_{it} - \bar{s}_{it}$, where s denotes firm's size;
 $\Delta \omega_{it} = \omega_{it} - \bar{\omega}_{it}$, where ω denotes firm's productivity

- **Intuition → the larger the Op gap the more resources are allocated towards larger and more productive firms**

Poland - OP gap and labour productivity growth

POLAND



Over the last decade, Poland has experienced a period of rather considerable growth in terms of **labour productivity**.

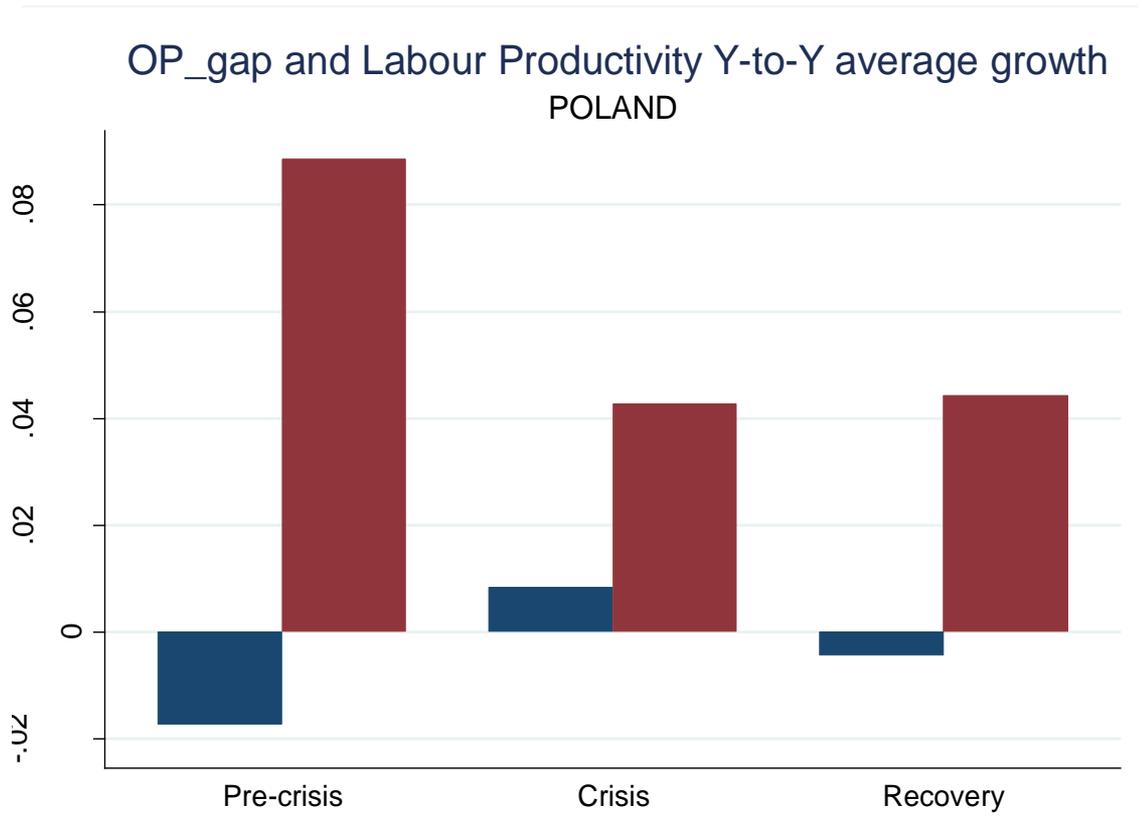
The role of **resource reallocation** to boost growth has been **modest but positive**

....with the exception of some **specific sectors** in which productivity has not gone hand in hand with higher firm size

Source: CompNet and author's own calculation (2002 – 2013 period)

Resource reallocation OVERTIME

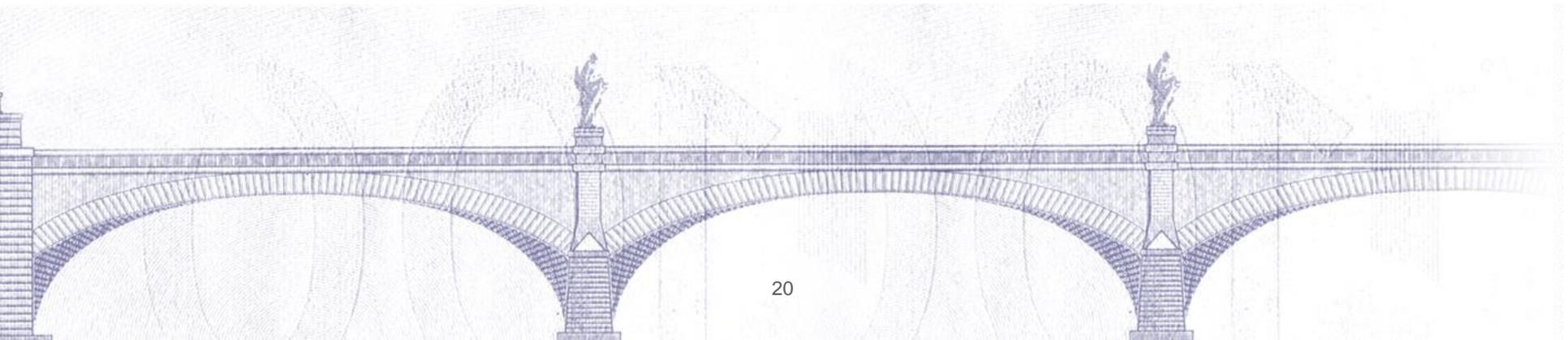
- Productivity gains came MOSTLY from better productive environment (Infrastructure, education), including GVCs
- The role of reallocation remained modest
 - Improved during the crisis ... *cleansing* effect
 - But reversed thereafter
- Are the appropriate policy in place (i.e. Product/labour market reform)?



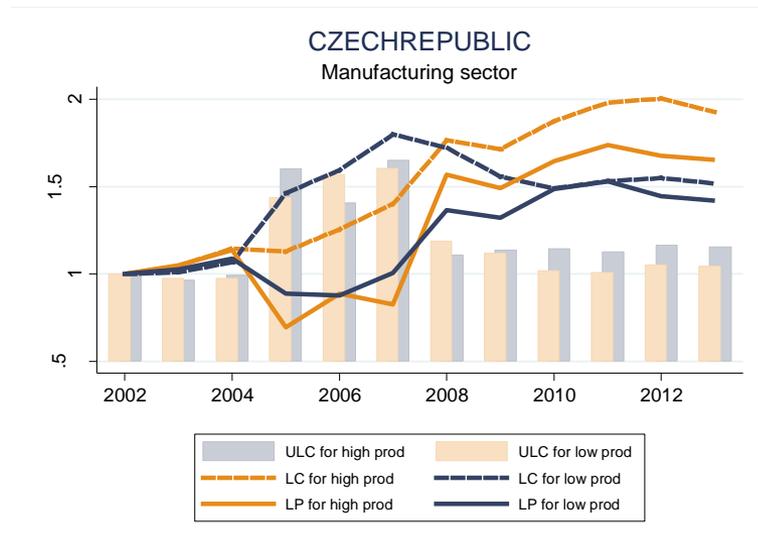
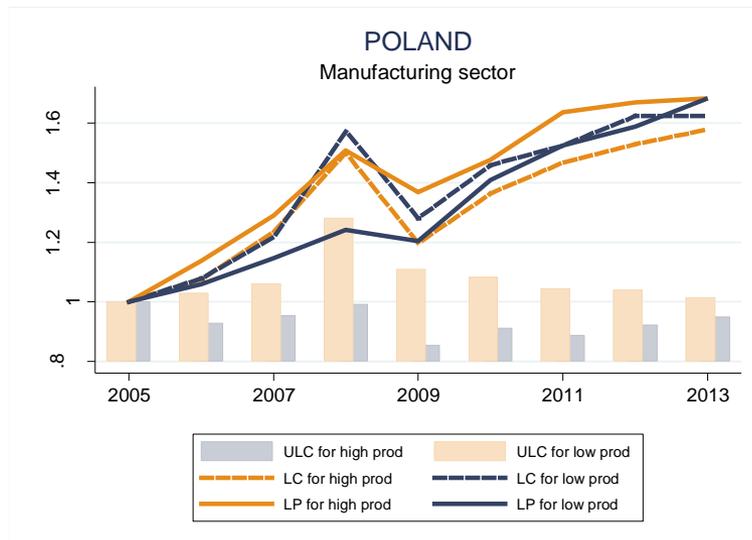
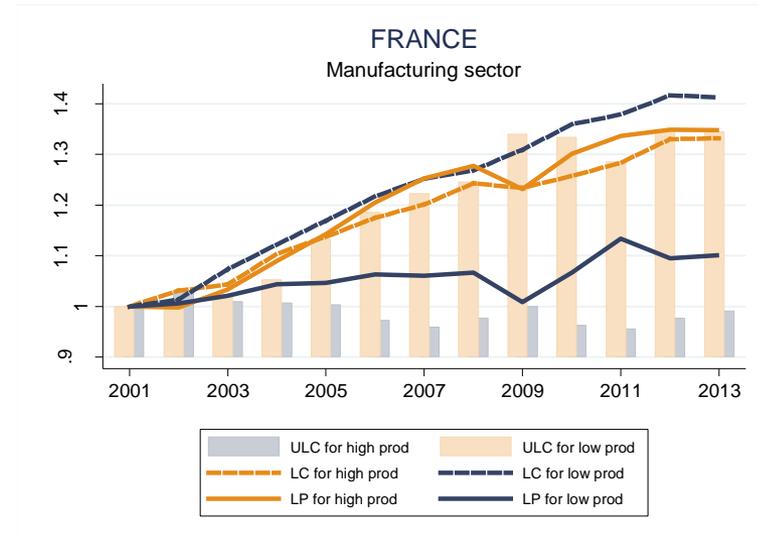
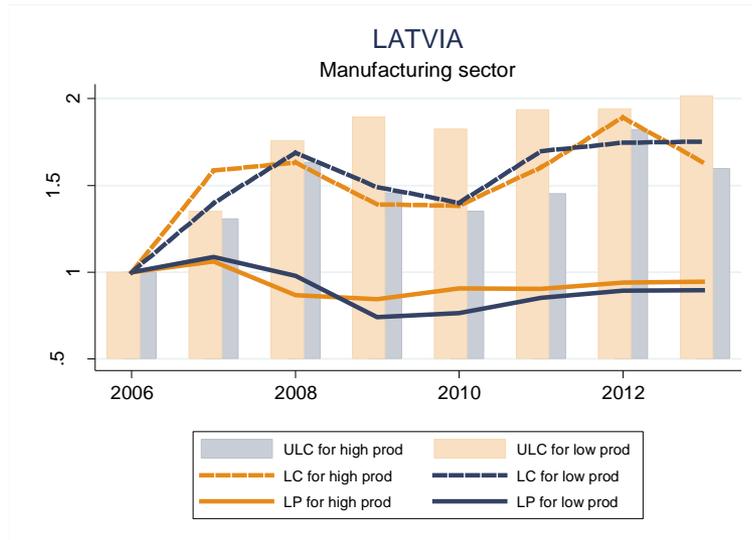
Attempting a synthesis

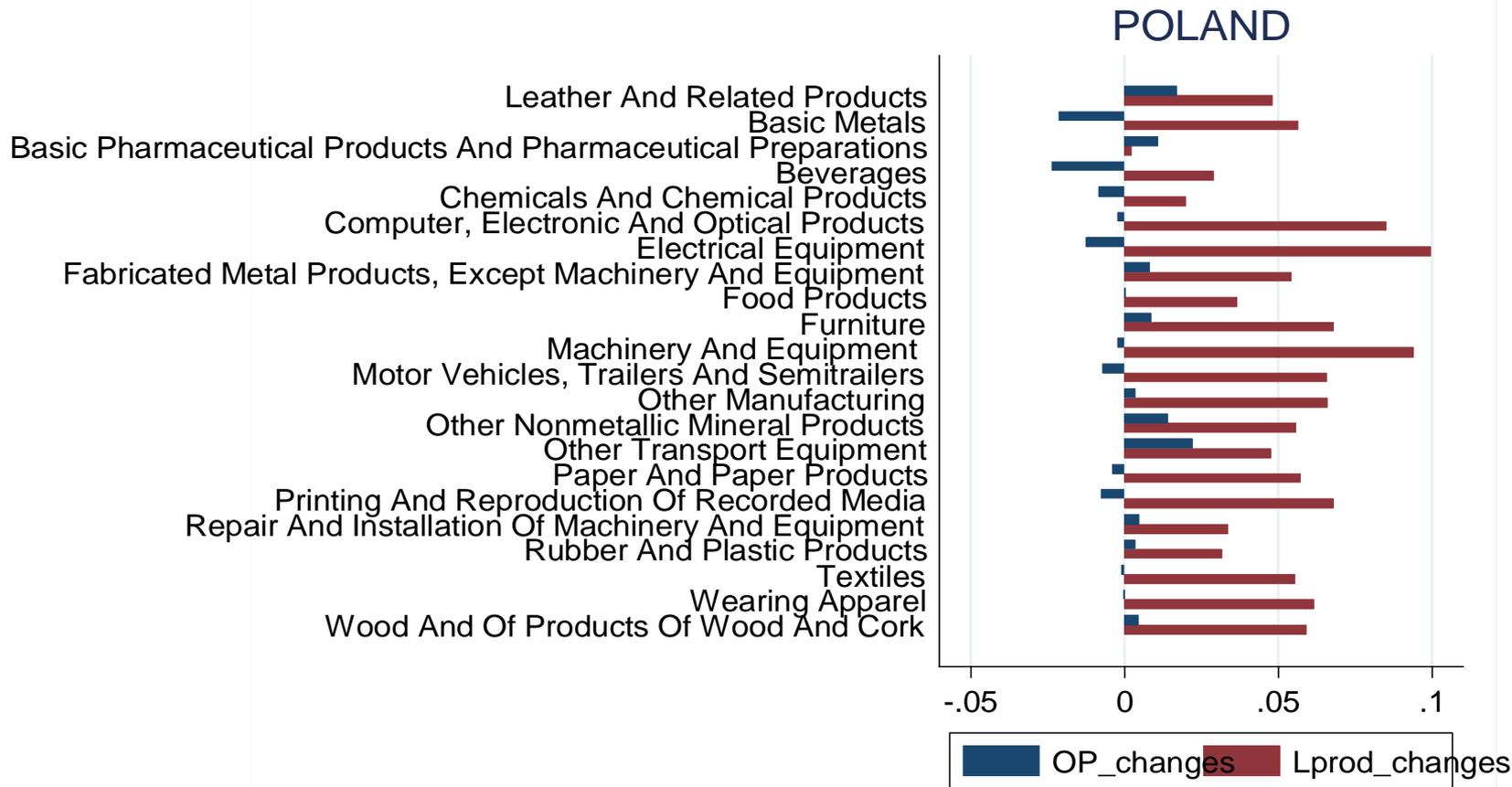
- Sluggish world trade calls for much deeper analysis of supply side drivers
- **CompNet** firm level analysis provides insights and permits "benchmarking" best cases in the country/sector comparison
- Export status is critical to boost productivity, but relative firm size and export concentration has a role to play
- Resource reallocation towards the most productive firms can boost significantly overall productivity of the economies (up to 20-30 percent in our sample)
- Evidence provided for Poland suggests a much lower contribution
- Worth to investigate why (e.g. frictions of institutional or other nature), including investing further to gather additional firm level information

Thanks for your attention!



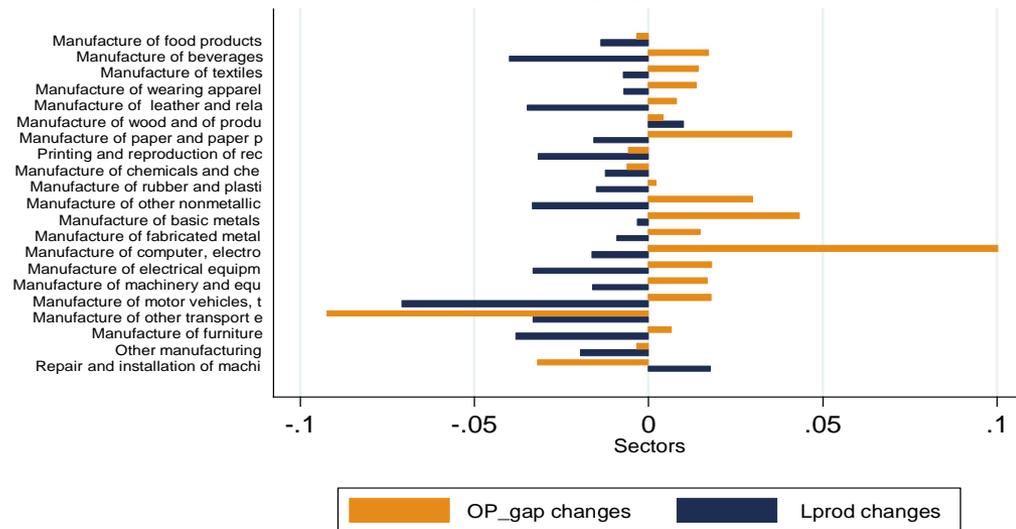
Labour productivity vs. Unit Labour Cost





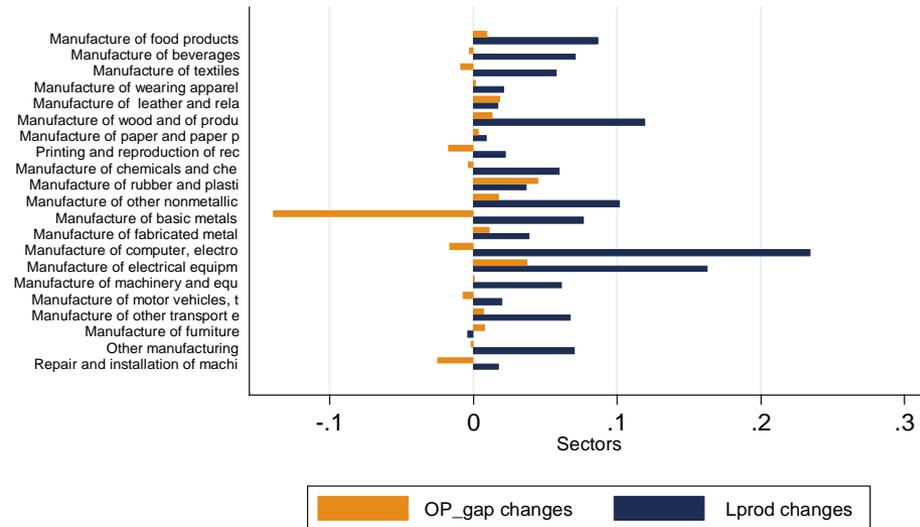
Total and between firms gains in productivity

CROATIA



Source: CompNet 20e sample

Total and between firms gains in productivity SLOVAKIA



Source: CompNet 20e sample