

# The EU Central Banks Competitiveness Research Network - CompNet

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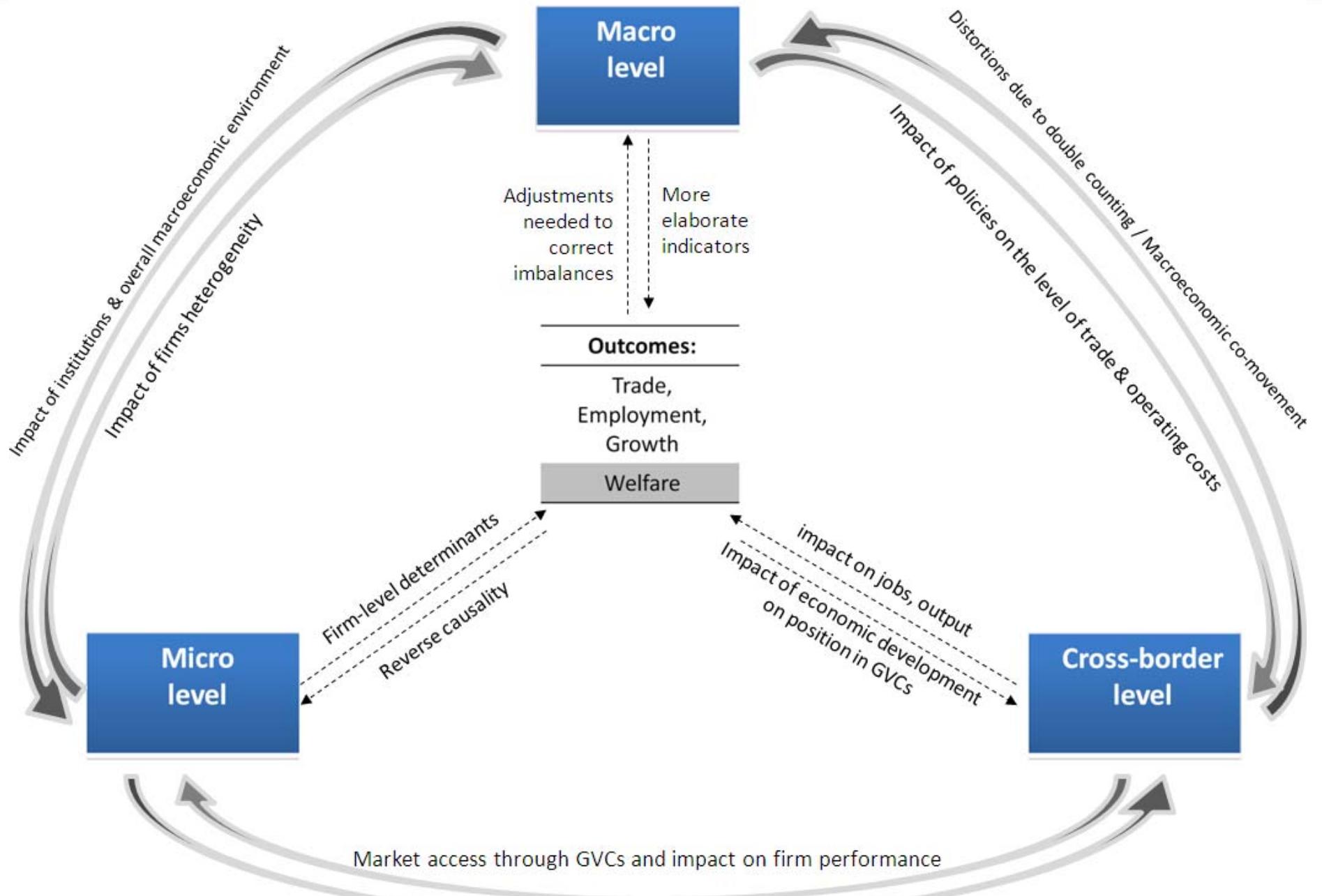
**INSEE Workshop – June 20, 2013  
Paris**

With critical input from E. Bartelsman, E. Bobeica, C. Osbat, C. Angeloni, N.  
Benatti, C. Altomonte, H. Plamper

# Outline

- 1. Approach**
- 2. Workstreams**
- 3. Interactions**
- 4. Way Forward**

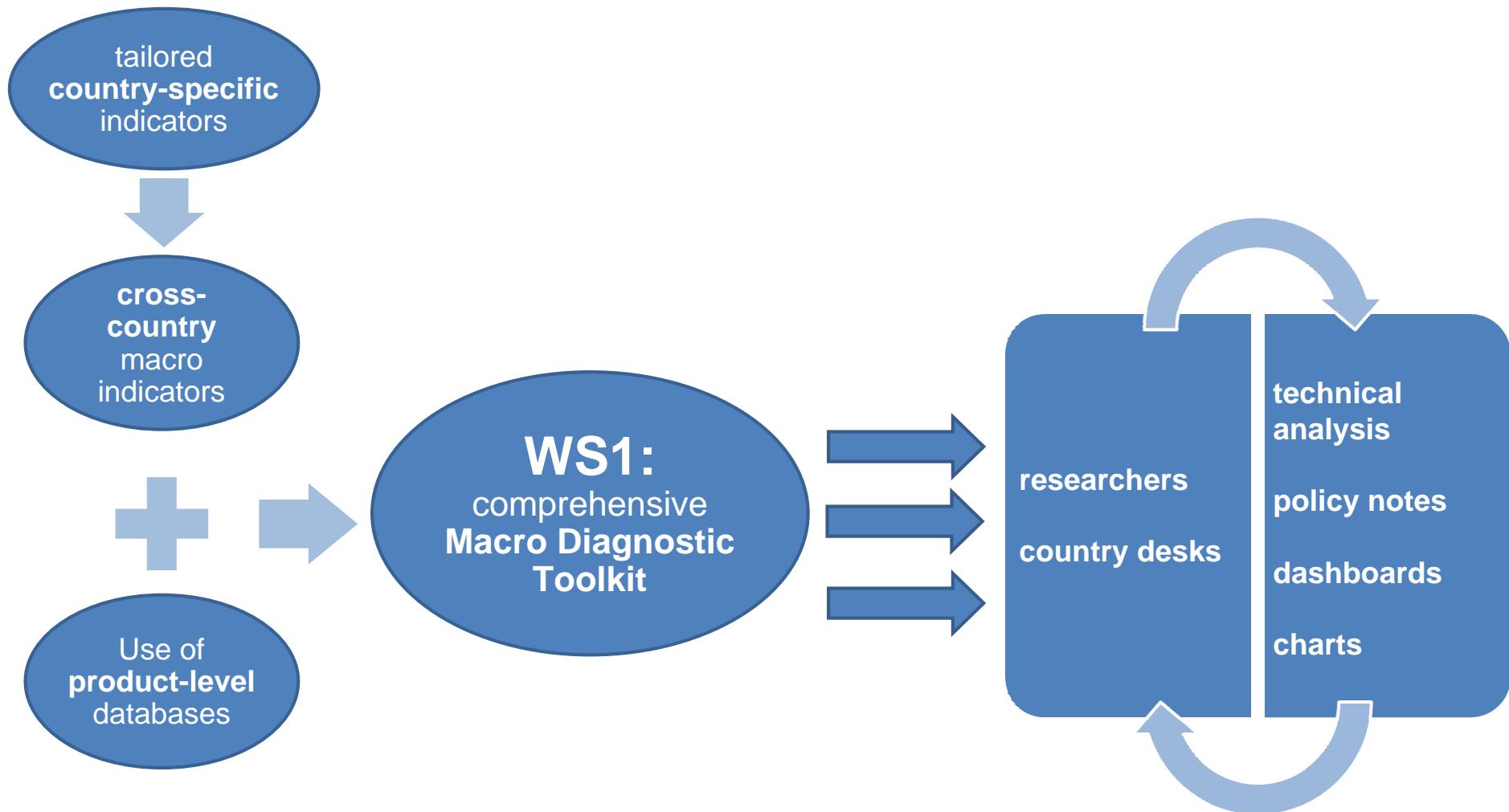
# 1. CompNet Approach to Competitiveness



## **2. Workstreams:**

**Approach, Value Added,  
Results**

## 2.1 WS1 Approach



# 2.1 WS1: Indicators (ready and in pipeline)

## 1) Price and non-price competitiveness

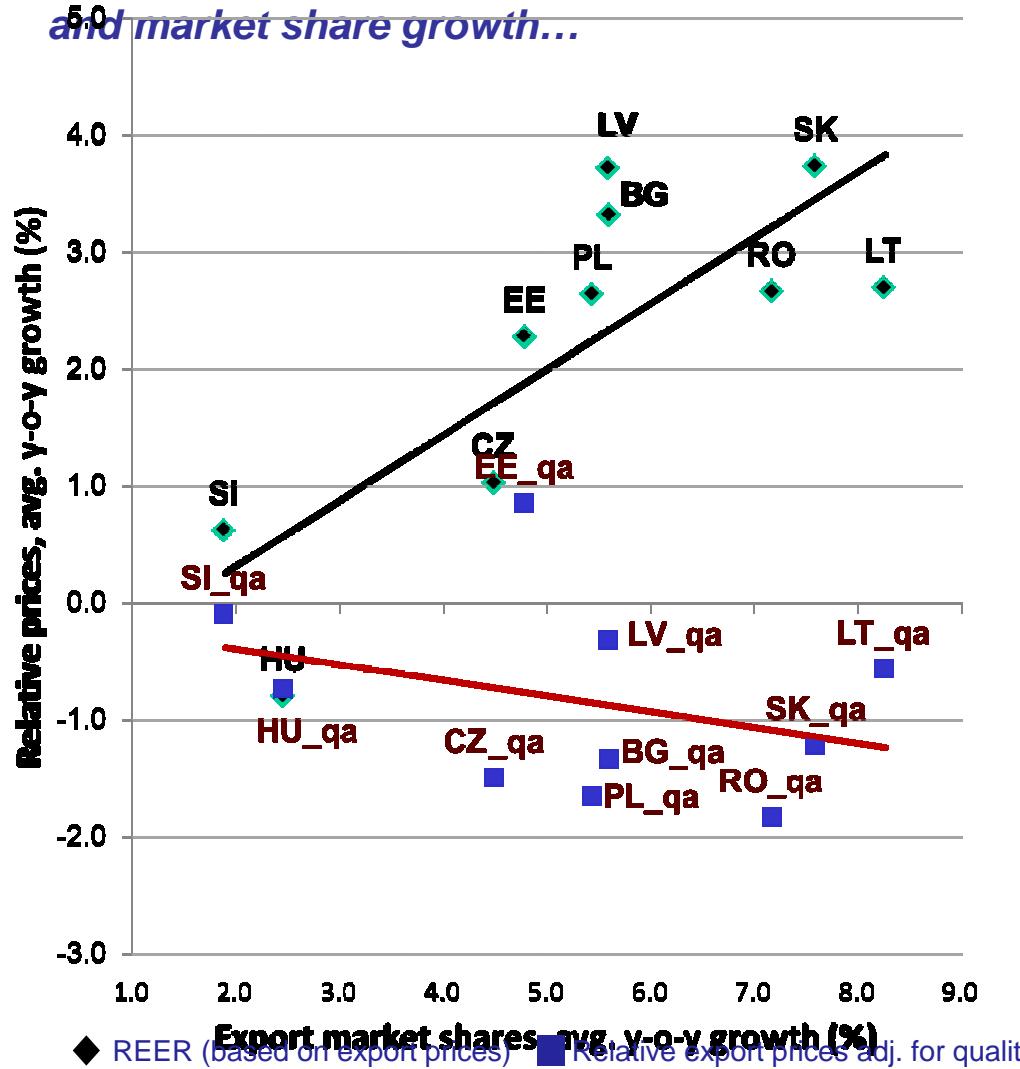
- Decomposition of trade balance in price/non-price driven
- Trade-weighted national unit labour costs
- Alternative HCIs based on trade in services and on value-added weights
- Quality-adjusted trade shares and export prices

## 2) In-depth analysis of product and geographical markets

- Shift-share analysis
- Extensive margins
- Sectoral specialisation in exports of services
- Measures of technological specialisation (imports and exports)
- Export sophistication index based on network analysis
- Barometer of competitive pressure from third countries

## 2.1 WS1: Selected New Findings

*Quality upgrade explains the positive correlation between relative export prices and market share growth...*

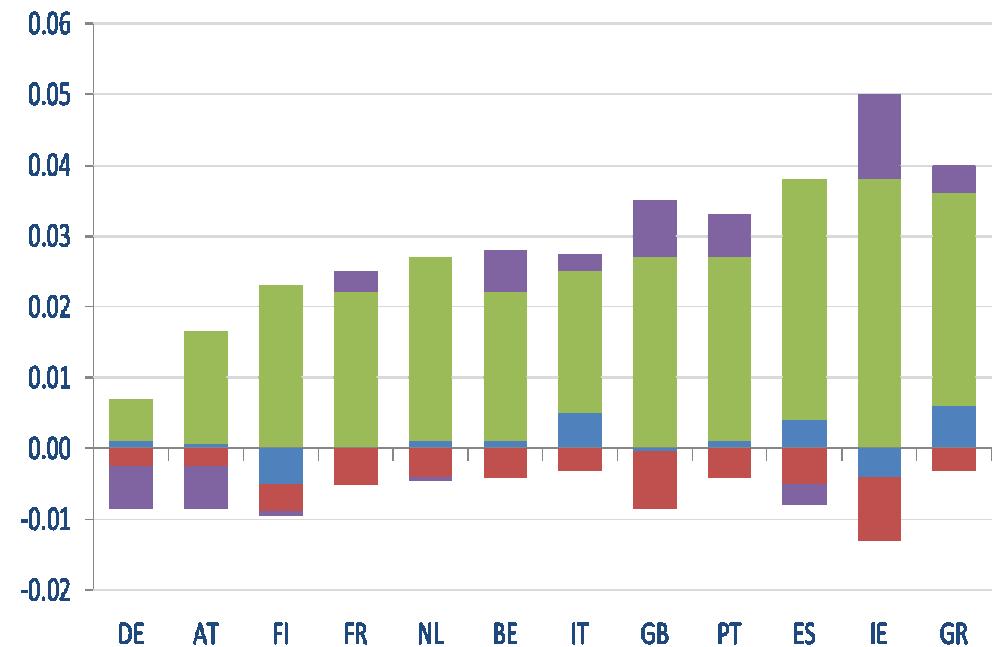


*Increase in ULCT occurred mostly in non-traded sector...*

*ULC decomposition (manufacturing vs. other sectors)*

(average y-o-y growth, 1999 - 2007)

- contrib manuf - price VA
- contrib other - price VA
- contrib manuf - w/VA
- contrib other - w/VA

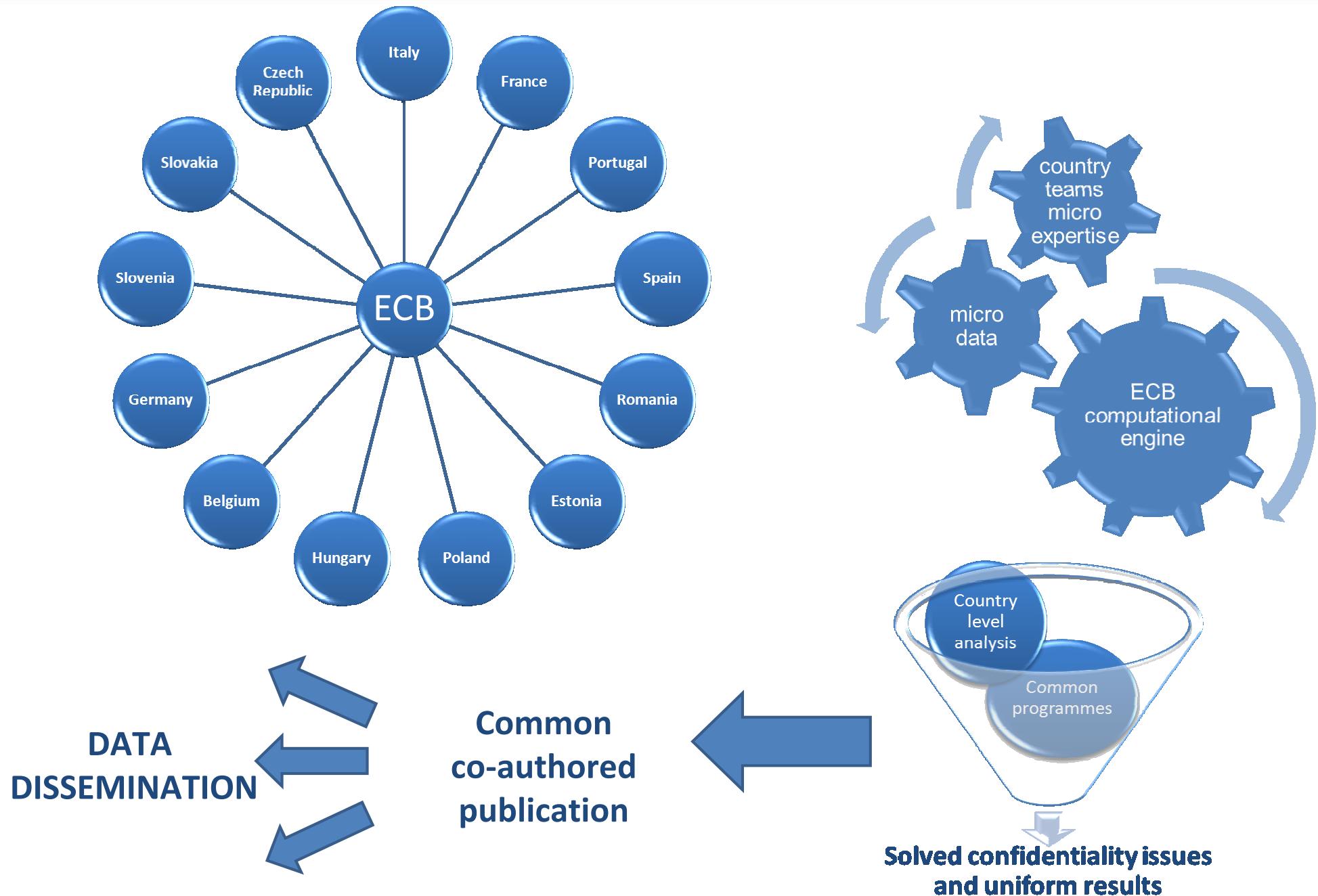


Source: Benkovskis and Wörz (2012), Eurostat

Source: Gaulier, Taglioni and Vicard (2012)

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## 2.2 WS2 Approach



## 2.2 WS2: Value Added

- 1) Harmonized set of productivity/labour market indicators**
- 2) Unique indicators not publicly available, in terms of coverage**
- 3) Emphasis not only on means, but also other moments of the distribution (incl. joint moments)**

## 2.2 WS2: Indicators

### CompNet Dataset Indicators

- Number of Employees
- Value added and Real Value Added
- Capital and Real Capital
- Material Costs
- Labour Cost
- Turnover and Real Turnover
- Capital/Labour Ratio
- Turnover/Labour Ratio
- Real Turnover/Labour Ratio
- Cost per employee
- Wage Share
- Labour Productivity
- Revenue-based Labour Productivity
- Capital Productivity
- Unit Labour Cost (ULC)
- Total Factor Productivity (TFP)

**Olley-Pakes Decomposition of:** Labour Productivity, Revenue-based Labour Productivity, Capital Productivity, TFP

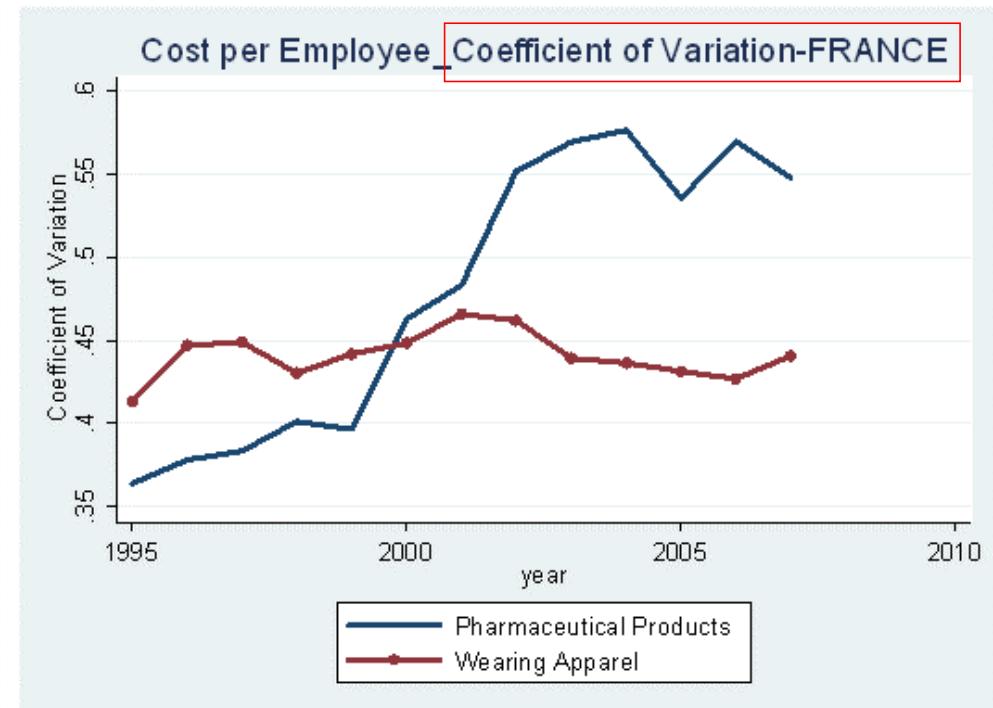
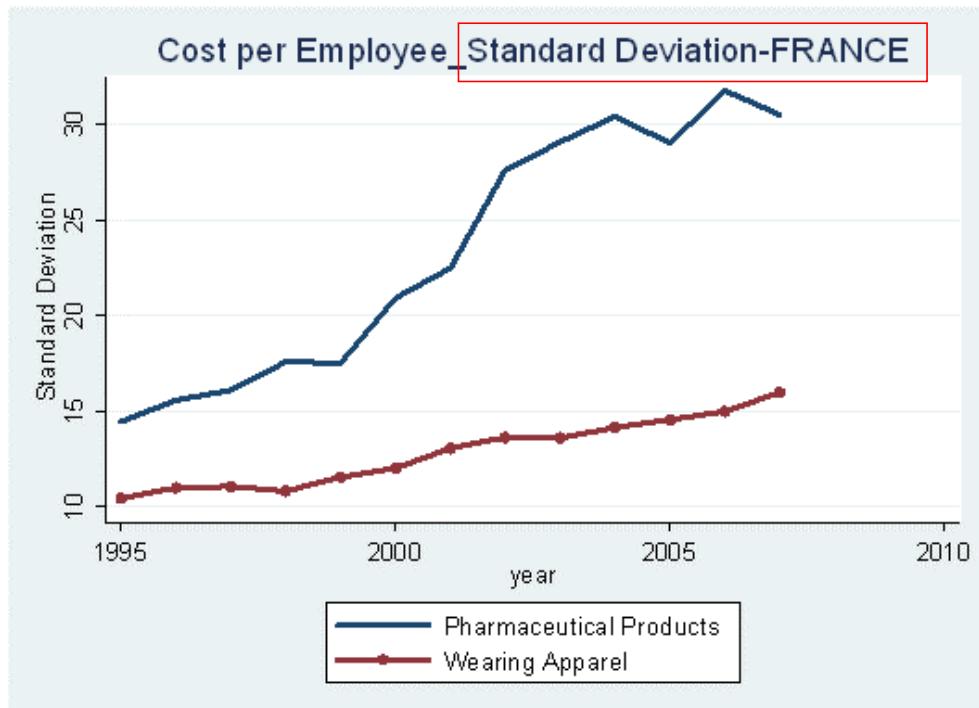
**Foster Decomposition (2 and 5 year lags):** TFP, Labour Productivity, ULC

## 2.2 WS2: Data Coverage

**Data coverage: 13 EU countries, pre and post-crisis time dimension, 60 NACE sectors (incl. manufacturing, construction, services)**

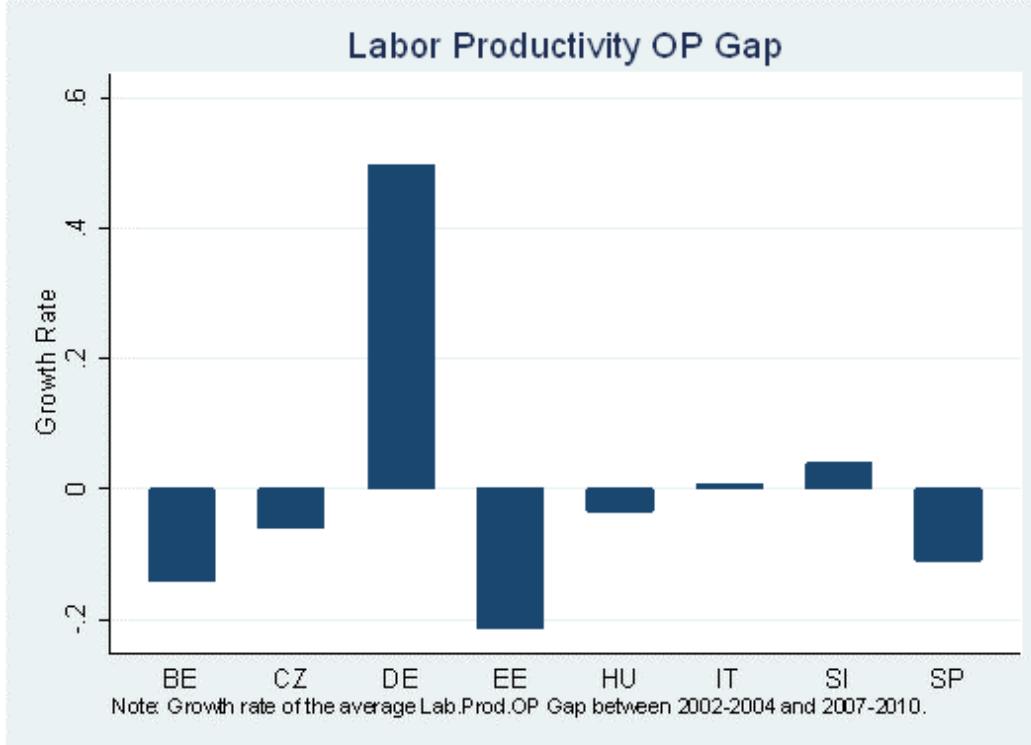
Country Coverage (Country responsible)	Time horizon
<b>BE</b> (Emmanuel Dhyne, Catherine Fuss)	1996-2011
<b>CZ</b> (Kamil Galuscak)	2002-2011
<b>DE</b> (Elena Biewen, Sven Blank)	1997-2010
<b>EE</b> (Jaanika Merikyll)	1995-2011
<b>ES</b> (Paloma López, Antonio Rodriguez, Patrocinio Tello)	1995-2011
<b>FR</b> (Antoine Berthou, Charlotte Sandoz Dit Bragard)	1995-2007
<b>HU</b> (Péter Harasztsosi)	2003-2010
<b>IT</b> (Matteo Bugamelli, Leandro Daurizio)	2002-2011
<b>IT-ISTAT</b> (Roberto Monducci, Stefania Rossetti)	2001-2008
<b>PL</b> (Jan Hagemejer)	2002-2011
<b>PT</b> (João Amador, Luca David Opronolla, Ana Cristina Soares)	2006-2009
<b>RO</b> (Bogdan Chiriacescu)	2003-2011
<b>SI</b> (Urska Cede, Andreja Lenarcic)	1995-2011
<b>SK</b> (Tibor Lalinský)	2000-2011
<b>EFIGE</b> (Giorgio Barba Navaretti, Emanuele Forlani)	2001-2008

## 2.2 WS2: Selected New Findings



Source: CompNet Dataset.

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Source: CompNet Dataset.

### Olley-Pakes (OP) decomposition

$$p_t = \sum_i s_{it} p_{it} = \bar{p}_t + \sum_i (s_{it} - \bar{s}_t)(p_{it} - \bar{p}_t)$$

plant  $i$ 's market share  
industry productivity

unweighted averages of productivity and share  
plant-level productivity

OP gap

The OP gap reflects allocation of resources:

Do firms with higher productivity have a greater market share?

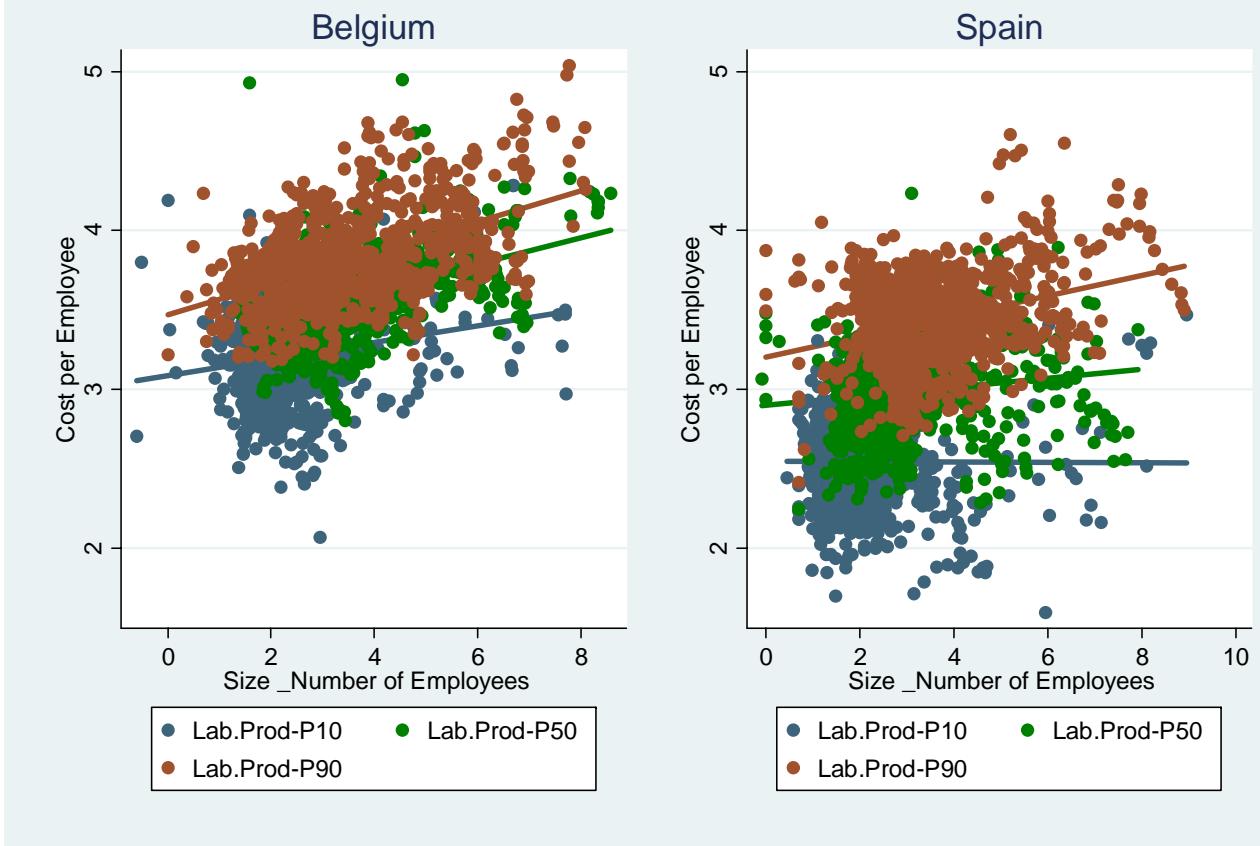
**Ideally:**

**The most productive firms are or become the largest.**

**The least productive firms are or become the smallest.**

## 2.2 WS2: Selected New Findings

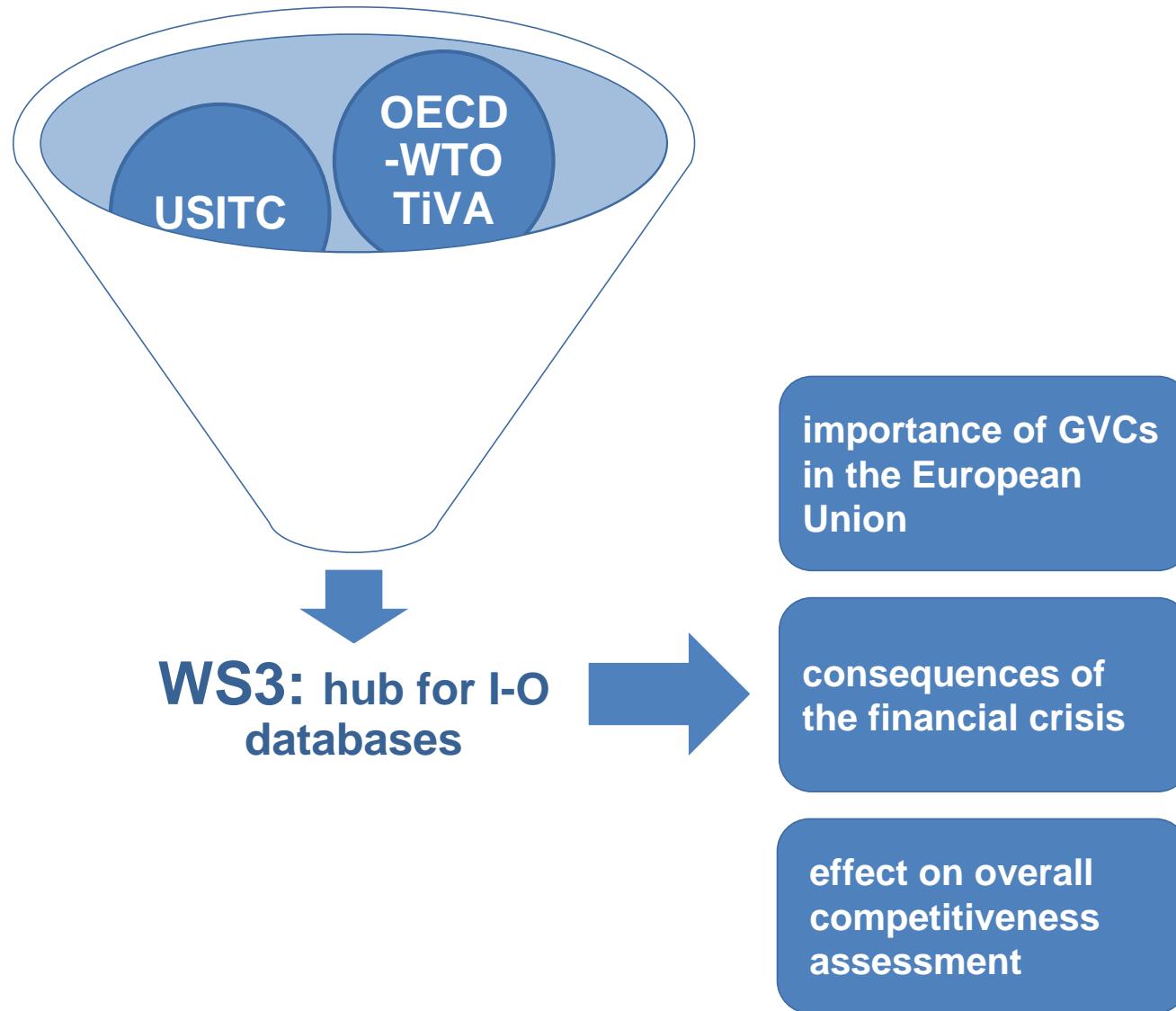
Size and Cost per Employee Relation, by productivity percentile



Source: CompNet Dataset

Note: Lab.Prod-P-10 include firms with labour productivity between the 1<sup>st</sup> and 10<sup>th</sup> percentile. Similarly, Lab.Prod-P-50 and Lab.Prod-P-90 include firms with labour productivity between the 25<sup>th</sup> and 50<sup>th</sup> percentile and the 75<sup>th</sup> and 90<sup>th</sup> percentile respectively.

## 2.3 WS3 Approach

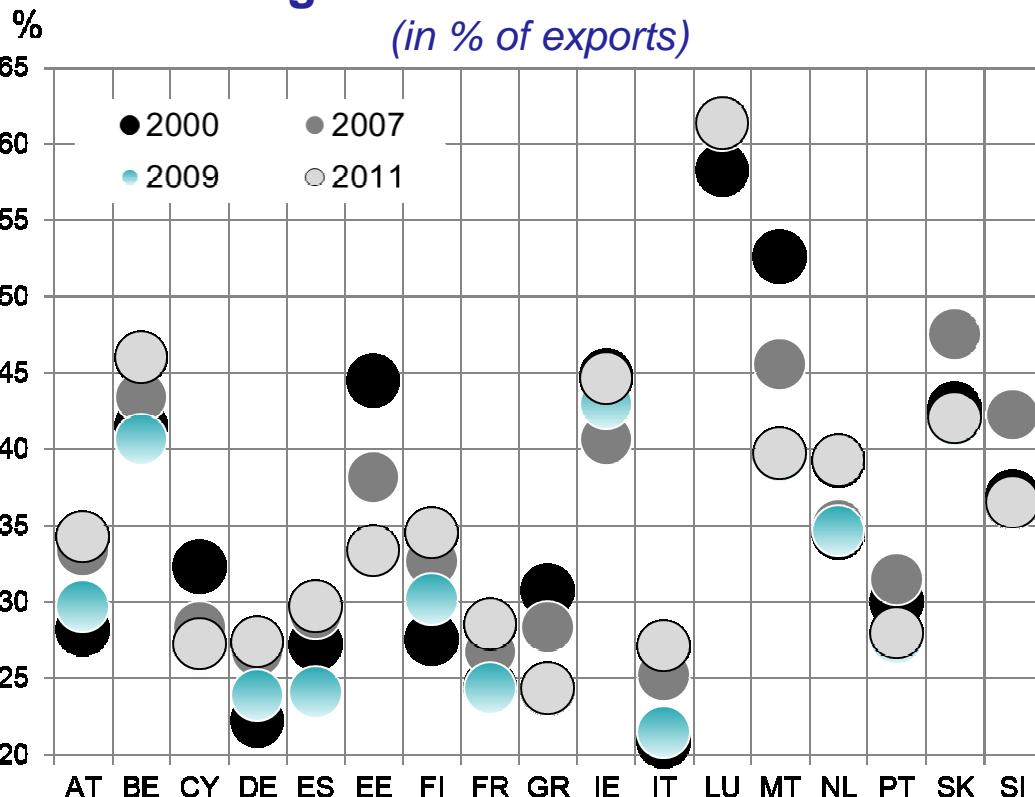


## 2.3 WS3: Selected New Findings

→ It is important to be a good importer...

→ Foreign VA is high and rising...

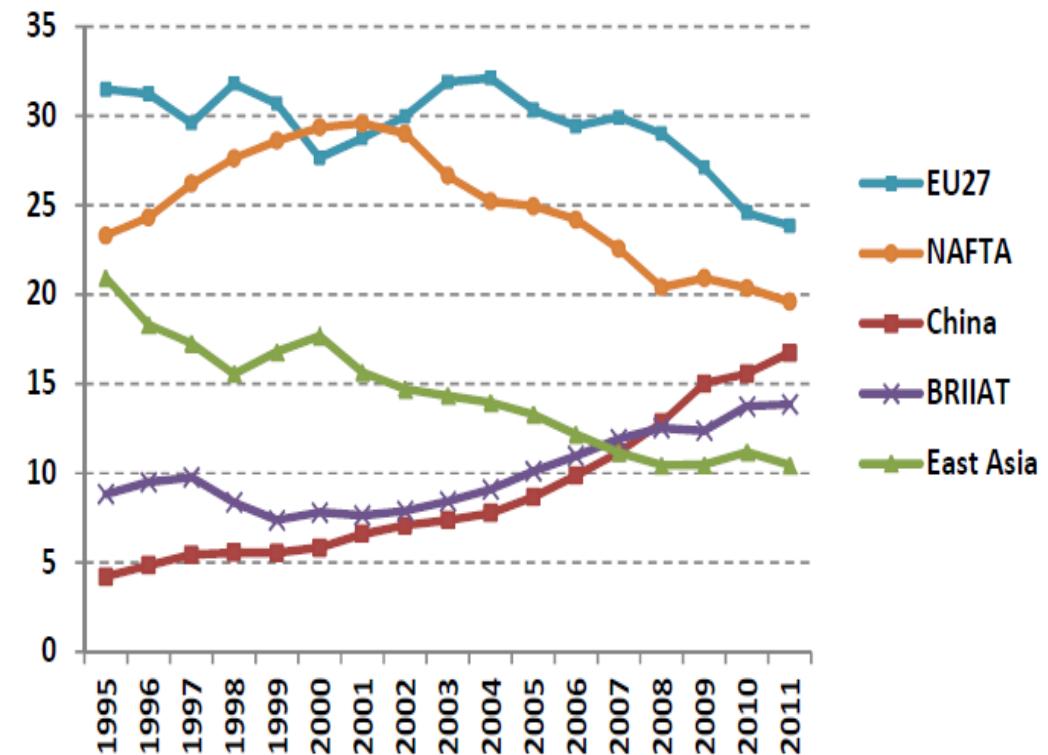
Total foreign value added in the euro area  
(in % of exports)



Source: WIOD, Amador, Cappariello and Stehrer

→ But the EU performance positive

Regional shares in world GVC income  
(total manufactures, in %)



Source: WIOD, Timmer, Los, Stehrer and de Vries

## 2.3 WS3: Selected New Findings (cont.)

→ Intra-euro area GVCs are very important...

→ Important bilateral supply linkages are present ...

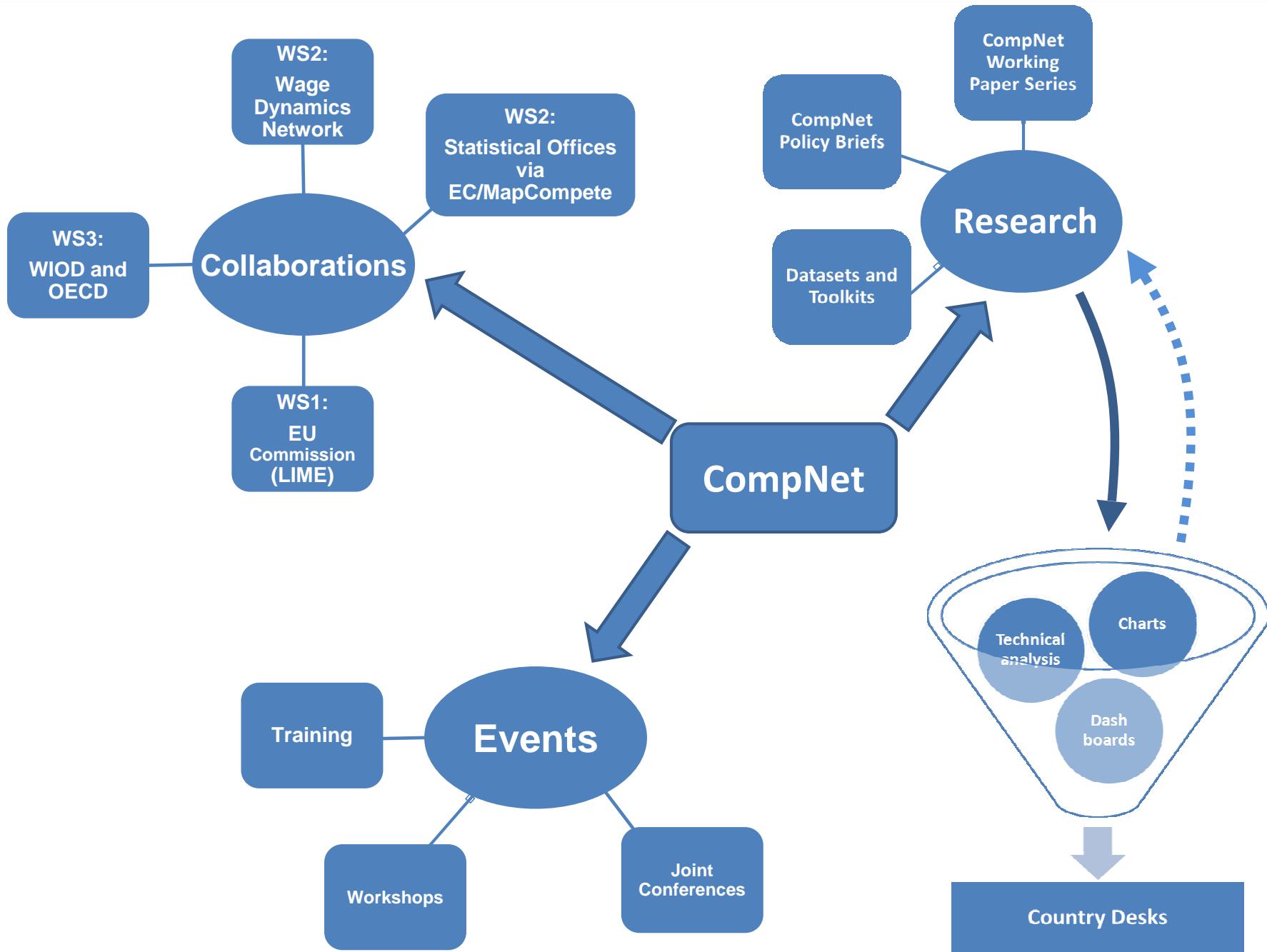
For row country, matrix presents the share of foreign value-added in exports from each euro area country (in column) on gross exports - 2011

	AUT	BEL	CYP	DEU	ESP	EST	FIN	FRA	GRC	IRL	ITA	LUX	MLT	NLD	PRT	SVK	SVN	Total EA
AUT	65,8	0,6	0,0	9,4	0,7	0,0	0,2	1,1	0,0	0,1	1,9	0,1	0,0	0,8	0,1	0,5	0,2	81,6
BEL	0,4	54,0	0,0	5,7	1,2	0,0	0,3	3,4	0,1	0,5	1,3	0,4	0,0	6,8	0,2	0,1	0,0	74,5
CYP	0,3	0,6	72,8	2,2	0,8	0,2	0,1	1,0	1,6	0,1	1,4	0,1	0,1	0,7	0,1	0,1	0,0	82,1
DEU	0,9	0,9	0,0	72,7	0,8	0,0	0,3	1,8	0,0	0,2	1,5	0,1	0,0	1,4	0,1	0,2	0,1	81,1
ESP	0,3	0,6	0,0	3,2	70,3	0,0	0,2	2,6	0,0	0,2	1,6	0,0	0,0	1,0	0,5	0,1	0,0	80,7
EST	0,3	0,5	0,0	3,1	0,4	66,7	2,5	0,7	0,0	0,2	0,8	0,1	0,0	0,7	0,1	0,1	0,1	76,2
FIN	0,3	0,6	0,0	3,1	0,4	0,4	65,5	0,8	0,1	0,2	0,8	0,0	0,0	1,2	0,1	0,1	0,0	73,6
FRA	0,3	1,2	0,0	4,9	1,5	0,0	0,1	71,5	0,0	0,2	1,7	0,1	0,0	1,1	0,2	0,1	0,0	83,0
GRC	0,2	0,6	0,1	1,8	0,5	0,0	0,1	0,8	75,7	0,1	1,8	0,0	0,0	0,6	0,0	0,0	0,0	82,4
IRL	0,2	0,6	0,0	2,2	0,8	0,0	0,1	1,1	0,0	55,4	1,0	0,1	0,0	1,2	0,2	0,0	0,0	63,0
ITA	0,5	0,6	0,0	3,3	1,0	0,0	0,1	1,6	0,1	0,2	72,9	0,1	0,0	1,0	0,1	0,1	0,1	81,7
LUX	0,6	3,6	0,0	4,3	2,5	0,0	0,1	2,3	0,0	0,6	0,9	38,7	0,0	1,5	0,1	0,2	0,0	55,5
MLT	0,7	0,7	0,1	3,4	0,9	0,1	0,2	4,2	0,1	0,3	4,5	0,0	60,3	1,0	0,1	0,1	0,0	76,6
NLD	0,2	1,7	0,0	4,0	0,8	0,0	0,3	1,4	0,0	0,2	0,7	0,1	0,0	60,8	0,1	0,1	0,0	70,3
PRT	0,2	0,6	0,0	3,0	6,2	0,0	0,1	1,5	0,0	0,2	1,4	0,1	0,0	0,9	72,1	0,1	0,0	86,4
SVK	0,9	0,5	0,0	7,2	0,7	0,0	0,2	1,7	0,0	0,1	1,7	0,1	0,0	0,9	0,1	58,0	0,1	72,3
SVN	2,1	0,7	0,0	5,9	0,8	0,0	0,2	1,6	0,1	0,1	4,5	0,1	0,0	0,8	0,1	0,4	63,5	80,8

Source: WIOD, Amador, Cappariello and Stehrer

## 3. Interactions

### 3. Interactions



### 3. ...with WDN

#### **CompNet contribution to WDN (within the existing DO.file)**

Provide quantitative inputs which could be matched with the WDN survey:

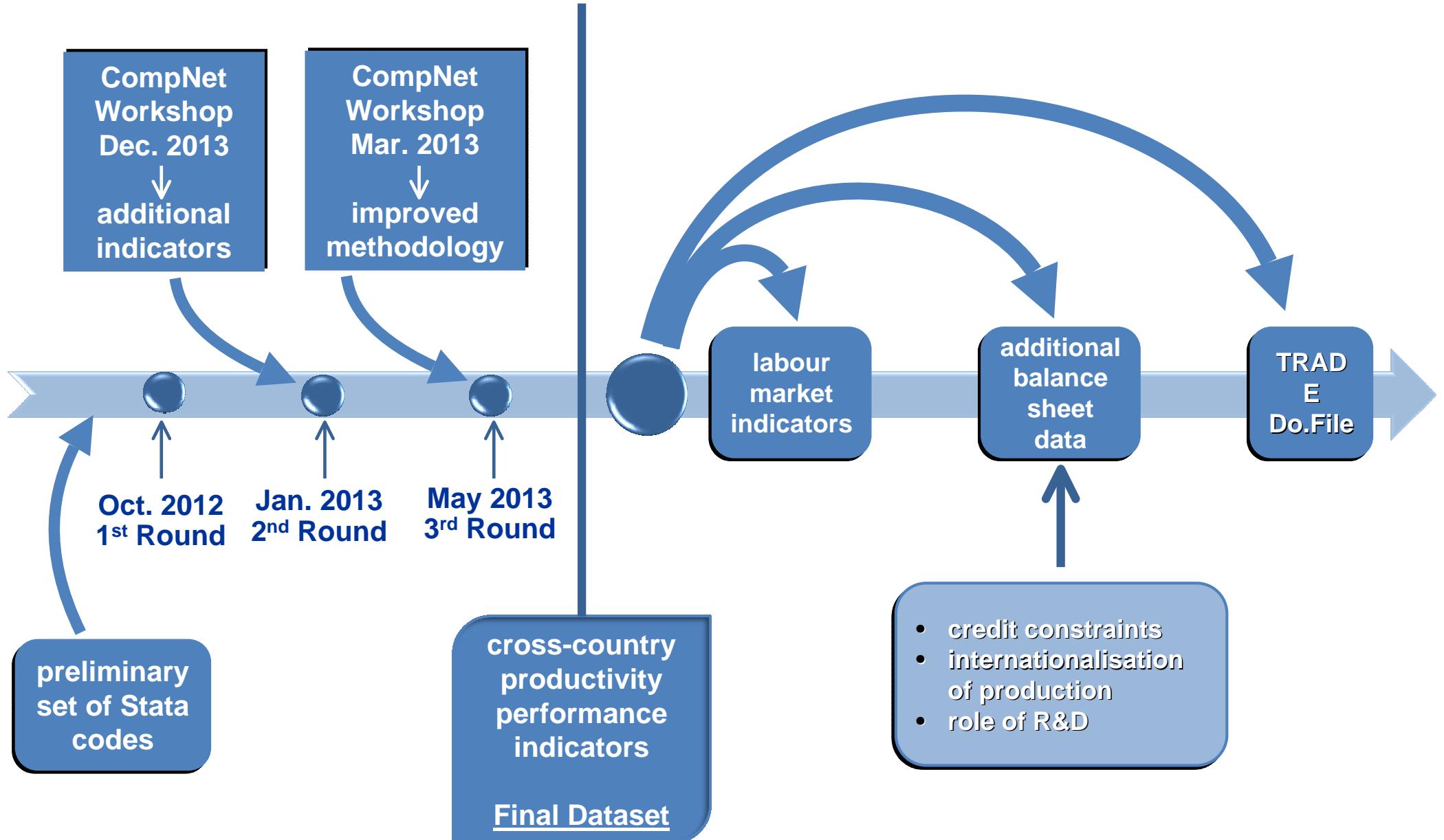
- Additional variables overlapping with WDN survey (age, skills, exporting status)
- Indicators of markets rigidities, specifically on labour and product market structure

#### **Next Steps for possible synergies with WDN:**

- **Check the potential of matching the two datasets (namely the possibility of matching the firm identifiers)**
- **Leverage on the member overlaps** (9 members of WDN are CompNet members)

## 4. Way Forward

## 4.1 WS2 Research Programme Timeline



## 4.2 WS2: Additional Indicators Inventory

	BE*	CZ	DE	EE	ES	FR	HU	IT	PL*	PT	SI	SK	RO
FDI/ or international operations of firms													
Status of firms (entry, exit or established)													
Size													
Age of firms													
Group													
Family owned firm													
Training expenditure													
Number of high skilled workers													
Temporary rate													
R&D Expenditure													
Production sold abroad (Export status of firm)													
Inputs imported													
Debt ratio													
Cash-flow ratio													
Share of commercial bank debt													
Share of short term debt													

\*Information collected in June 2013, information marked \* has been collected in January 2013

Note: Green – available, red – unavailable, yellow - preliminary

# Way Ahead for CompNet

**Final Aim:** Develop theoretical and empirical framework connecting indicators and policy outcomes across the macro, micro and cross-border level, to:

- Provide policy makers and country teams with deeper understanding of country-specific structural issues (productivity, reallocation, cost of production factors)
- Fine-tune cross-country policy advice based on micro-founded indicators: e.g. “was the recession cleansing?”

**Thank you for your attention**