

# Product market regulations and the functioning in a monetary union

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# Plan of the presentation

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- ▶ Motivation and objectives
- ▶ Product market regulations
- ▶ Methodological issues
- ▶ Results
- ▶ Case study: Poland

# Motivation and objectives

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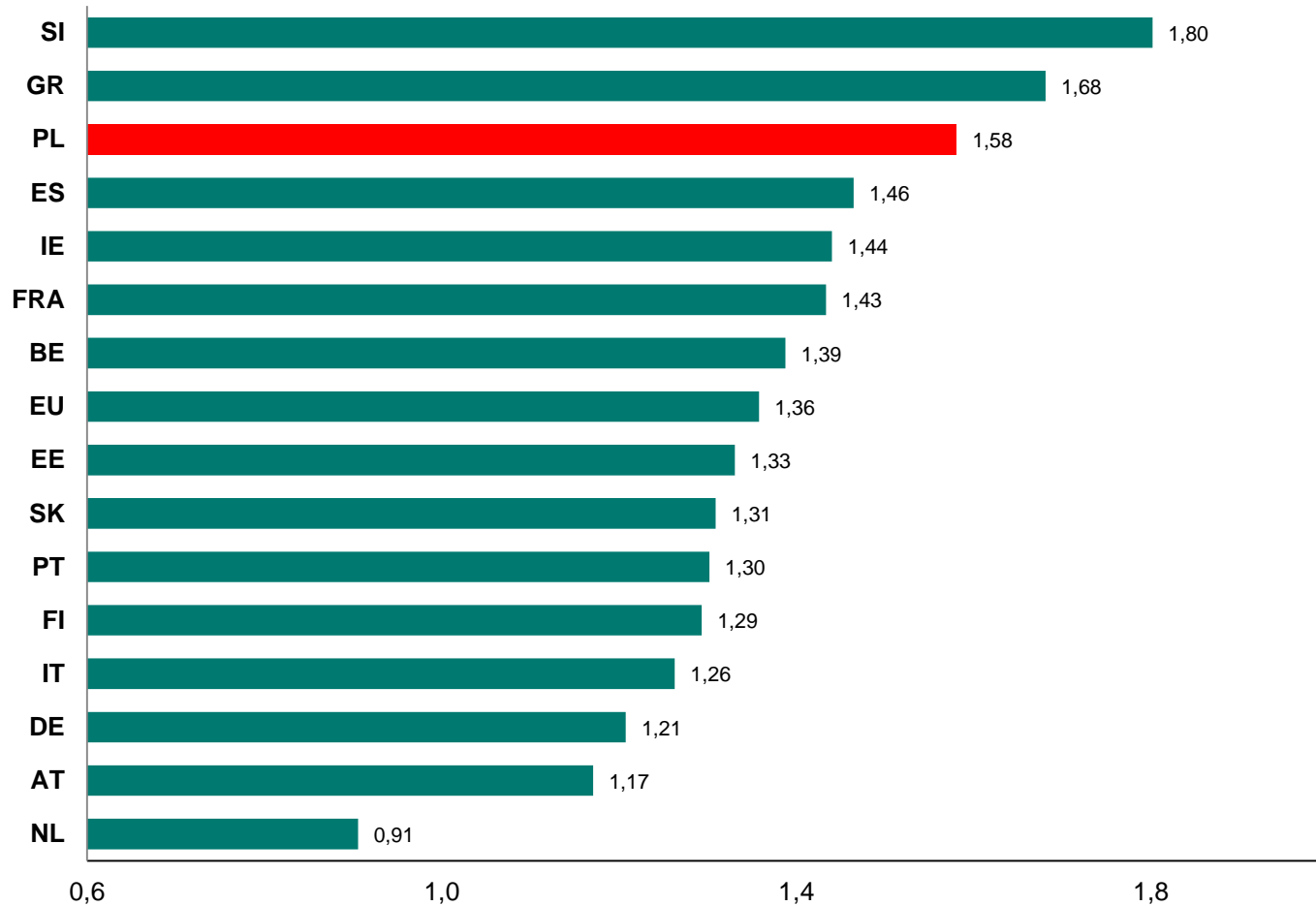
- ▶ Lessons from the global financial crisis and the eurozone crisis: structural weaknesses in economic growth models of some member states
- ▶ Faster pace of the real convergence as a result of structural reforms implementation
- ▶ Product market reforms foster competition and competitiveness
- ▶ Euro adoption: timing undefined, preparations beneficial *per se*, how to handle asymmetric shocks?

# Product market regulations

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- ▶ OECD Indicators of Product Market Regulation (PMR) for 34 countries (economy-wide and sectoral):
  - ▶ State control of business enterprises
  - ▶ Legal and administrative barriers to entrepreneurship
  - ▶ Barriers to international trade and investment

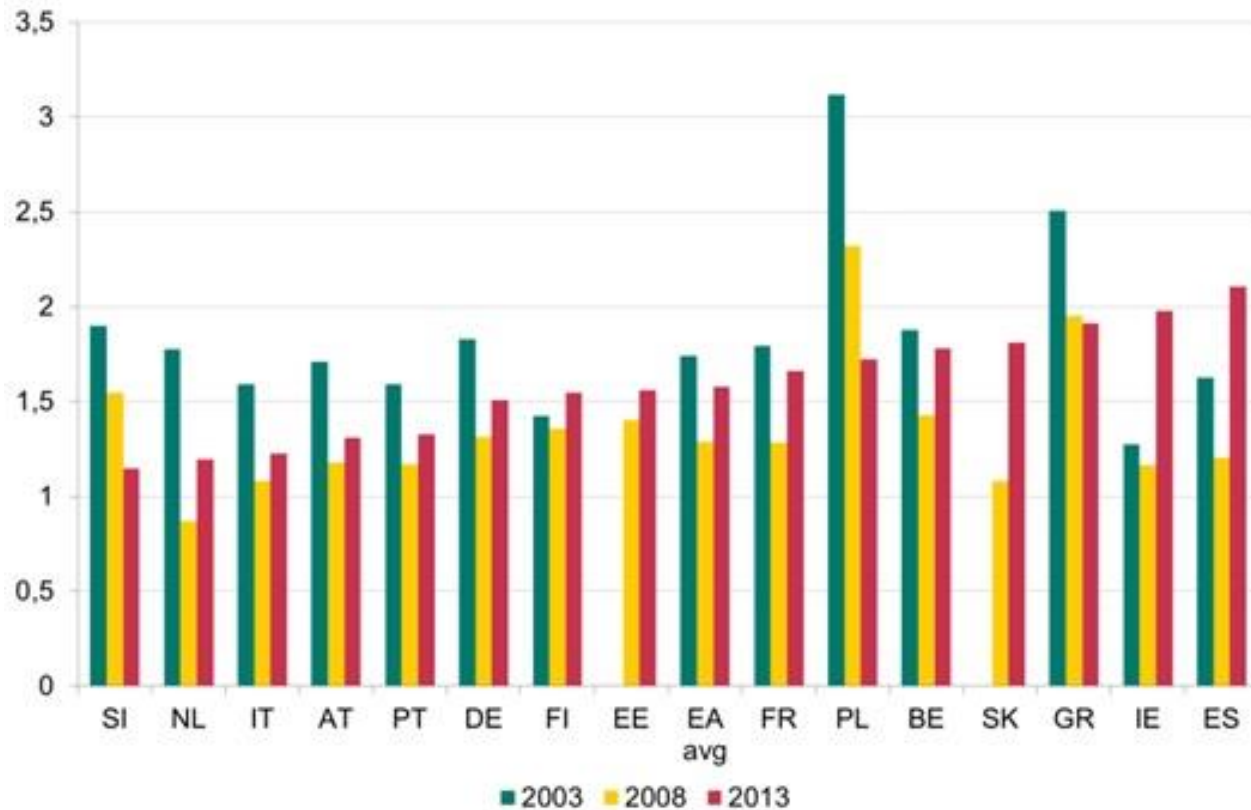
# Product market regulations



Source: PMR 2013 (OECD)

# Product market regulations

## Barriers to entrepreneurship



Source: PMR database (OECD)

# Product market regulations

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- ▶ Product market integration contributes to smoother shock adjustments (Mongelli, 2008)
- ▶ Improved product market regulations result in GDP growth (OECD, 2014)
- ▶ Product market reforms reduce structural divergence within monetary union through gains in productivity and increases in industrial specialization (Lane, Conway)

# Product market regulations

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- ▶ Cross-country differences in income are mostly caused by TFP differences (Haltiwanger et al.)
- ▶ Heterogeneity in firm-level productivity performance may imply misallocation of resources (Scarapetta et al.)
- ▶ Higher productivity dispersions imply also less favourable innovation environment what in turn leads to technological differences across countries (Peters).



# Product market regulations

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- ▶ **Product market reforms:**

- ▶ **Narrow perspective:**

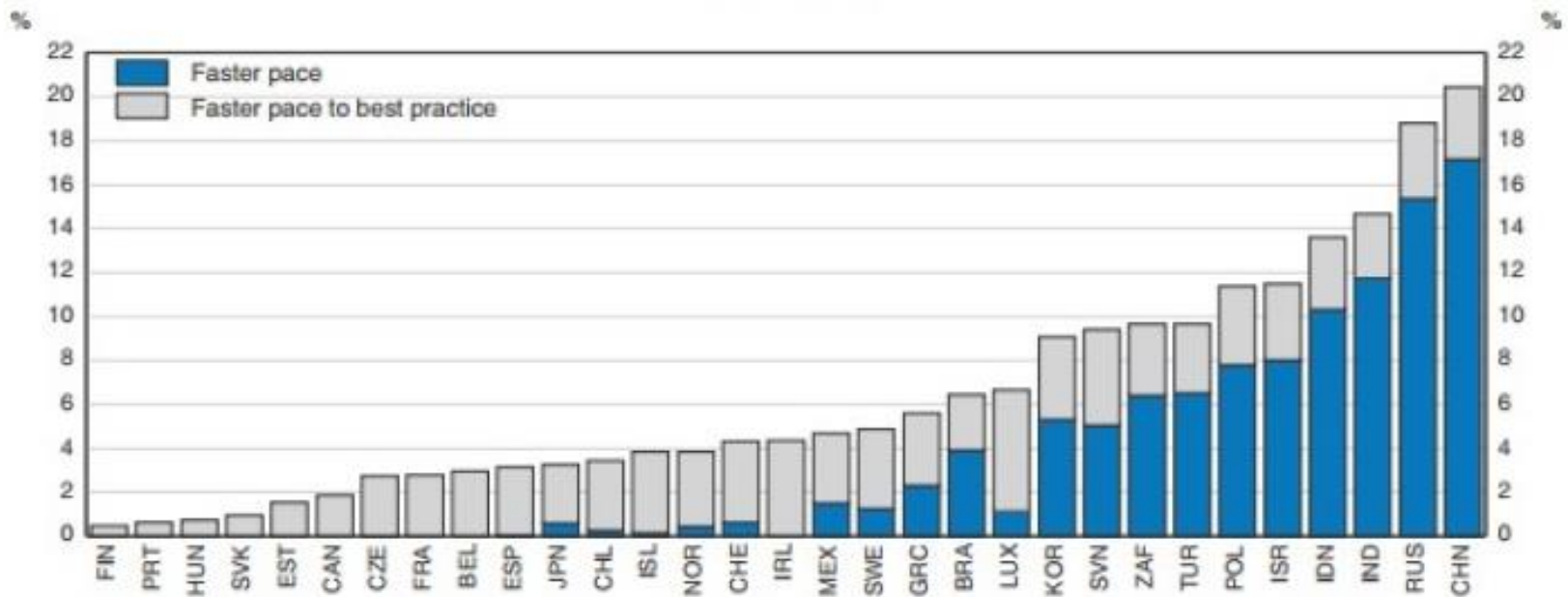
- ▶ Internal (EU) market integration
    - ▶ EU competition policy
    - ▶ National regulations in the sectors of intermediate goods
    - ▶ Openness of the economy

- ▶ **Wider concept:**

- ▶ Business environment
    - ▶ Barriers to entrepreneurship
    - ▶ Knowledge-based skills and capital
    - ▶ State ownership\*

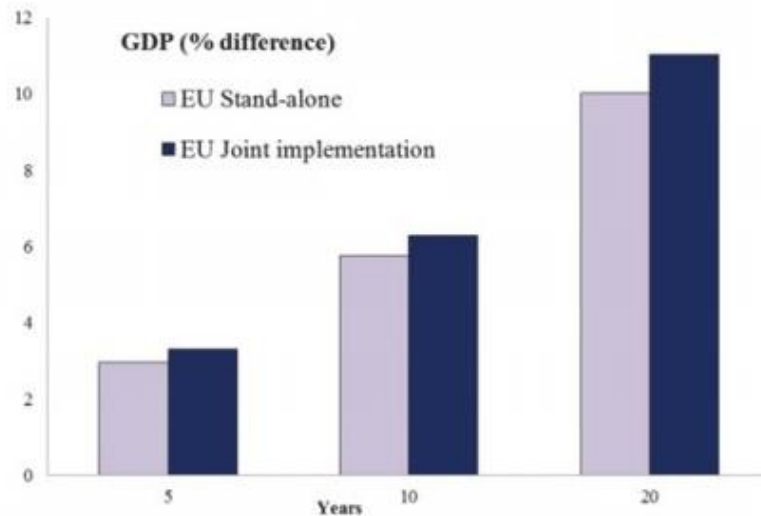
# Product market regulations

## The effect of improved PMR on GDP in 2030

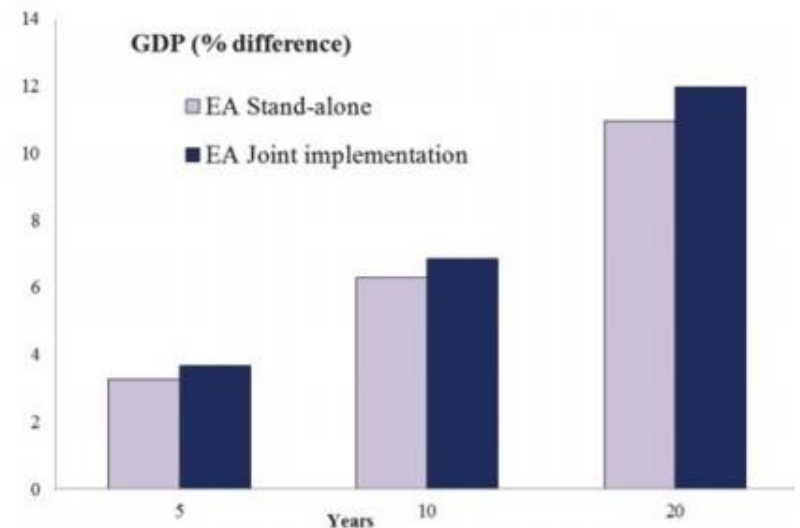


Source: OECD Economic Outlook 2014

# Product market regulations

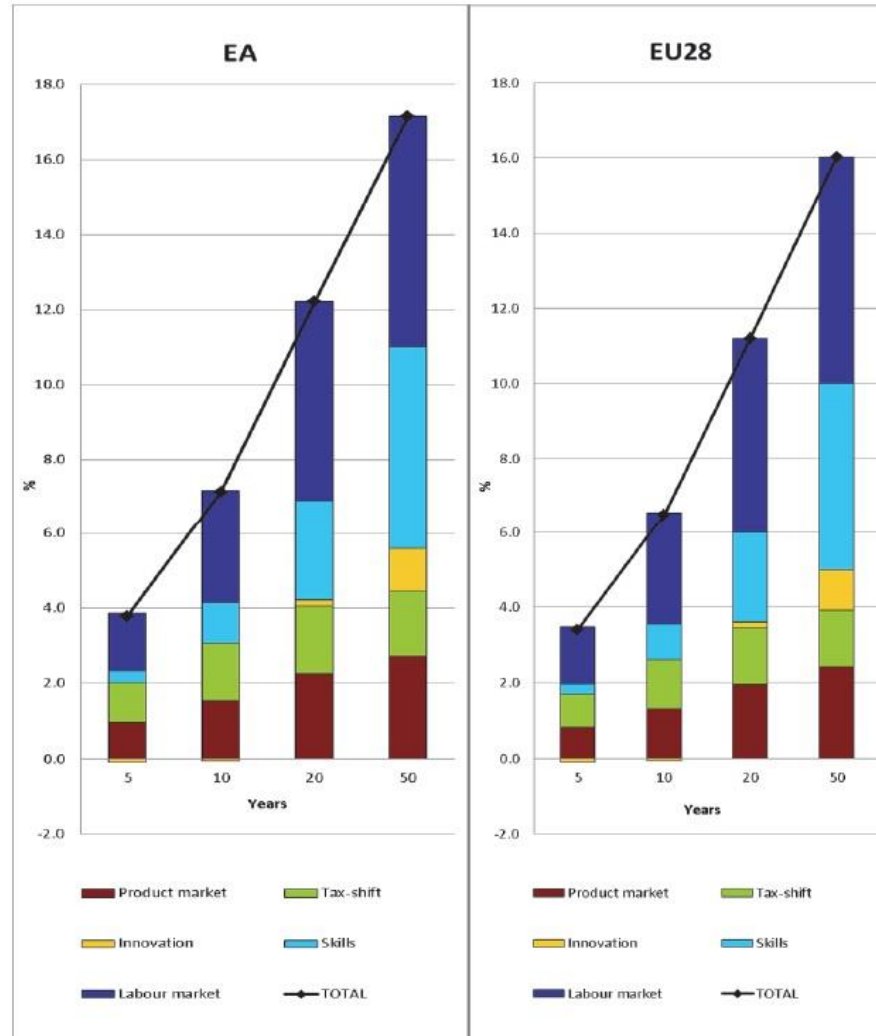


- Demand spillovers
- Competitiveness effects
- International financial flows
- Knowledge spillovers



Source: Varga and Veld (2014)

# Product market regulations



Source: Varga and Veld (2014)

# Product market regulations

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- ▶ Product market reforms foster competition which results in higher productivity gained through:
  - ▶ allocative (reallocation of resources),
  - ▶ productive (improvement in the utilisation of the production factors),
  - ▶ dynamic efficiency (innovation and technology improvement).

# Product market regulations

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- ▶ Since policy and institutional settings in product and labour market may influence performance of existing firms as well as creation or failure of units **it is extremely important to find out what drives heterogeneity of firms.**

# Methodological issues

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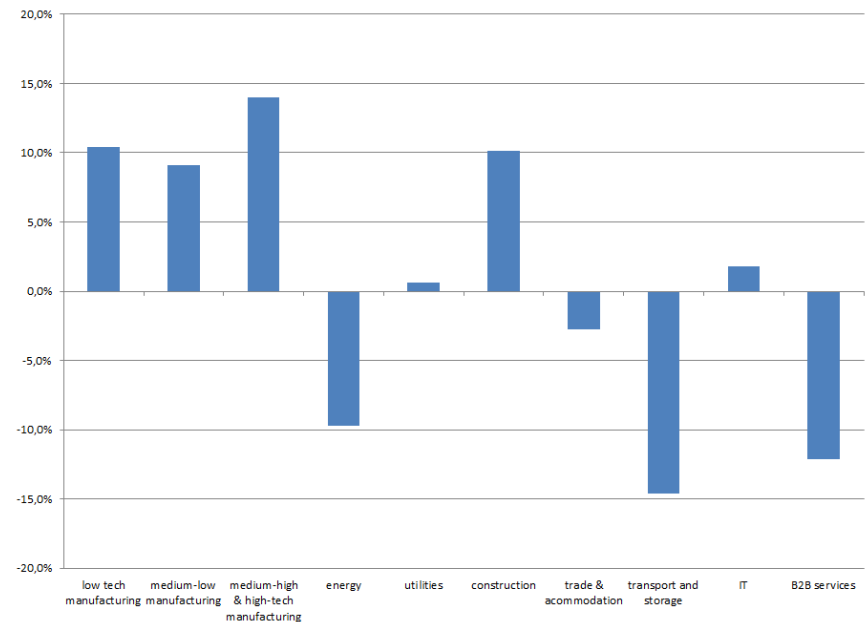
- ▶ Data: Amadeus database for DEU, FRA, PRT, ITA, ESP, (BEL)
- ▶ Period: 2002-2011
- ▶ TFP changes as a result of technology or managerial effectiveness
  - ▶ But also as the efficiency of resources allocation across establishments
- ▶ Decomposition by Olley and Pakes (1996)
  - ▶ Mean of the firm-level productivities (unweighted productivity)
  - ▶ Covariance between the individual productivities and the individual share in the market (OP-term): the higher → the better
- ▶ Dynamic decomposition by Melitz and Polanec (2014)
  - ▶ Change in market shares between surviving companies
  - ▶ Growth in the surviving companies
  - ▶ The impact of net entry

# Results

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- ▶ Manufacturing and construction sectors stand out as ones with the most efficient allocation of resources.
- ▶ On the other extreme, in highly regulated industries clear misallocation can be seen.

**Allocative efficiency across sectors**

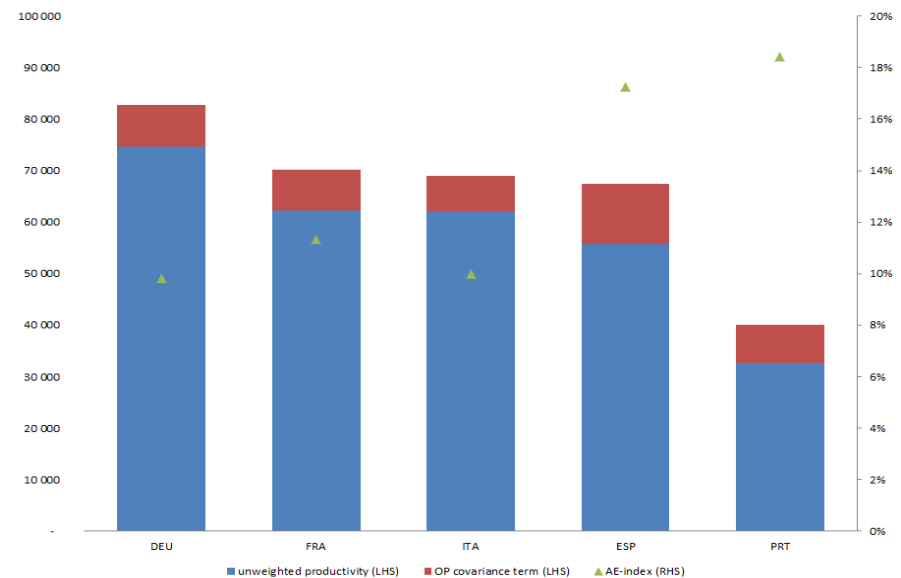




# Results

- ▶ DE has the highest unweighted productivity among EA countries, followed by FR and Italy, while ES and, especially, PT exhibit a significant gap in unweighted productivity.
- ▶ ES and PT were able to compensate lower average productivity by relatively more efficient allocation.
- ▶ IT displays moderate values of AE-index in all analysed sectors

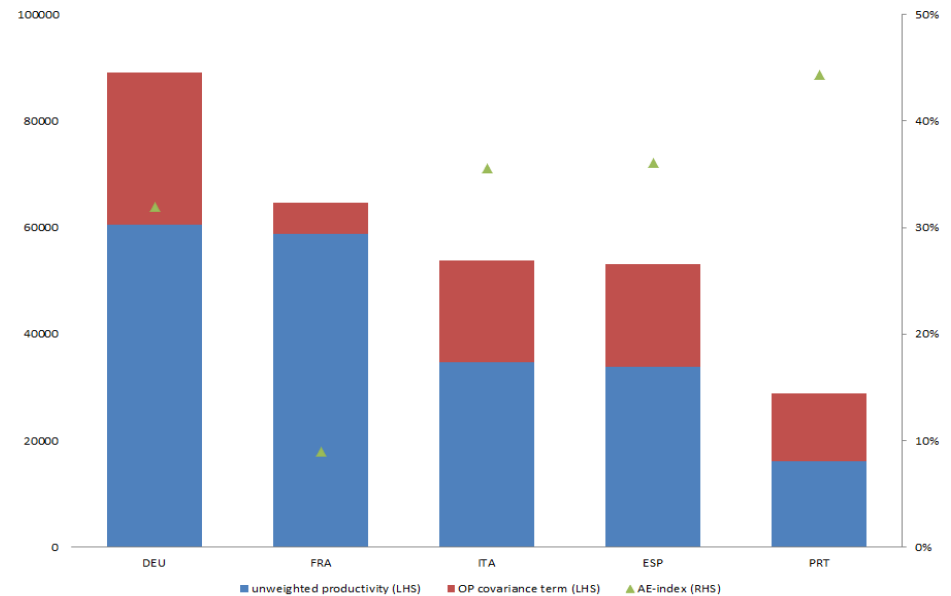
**Manufacturing firms sized 20+**



# Results

- ▶ These results are broadly consistent with the ones for firms sized 20+
- ▶ The differences may suggest:
  - ▶ the smallest firms in FR are more productive than their DE counterparts but they still pull the resources away from the bigger, far more productive manufacturing companies.
  - ▶ the Southern EA members are dominated by the very small and unproductive enterprises.

## Manufacturing firms sized 20+ (imputed data for smaller firms)



# Results

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- ▶ Summary of static decomposition
  - ▶ significant misallocation and productivity problems in the EA economies
  - ▶ DE and FR exhibit the lowest efficiency of allocation, especially in services (despite having much higher average firm productivity).
  - ▶ ES and PT firms manage the available resources better but are not productive enough to increase their levels fast enough
  - ▶ IT is an intermediate case: significant unweighted productivity gap towards DE and FR but slightly better allocation
  - ▶ in all countries, non-manufacturing sectors had far lower (and often negative) allocative efficiency than manufacturing sector

# Results

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## ▶ Interpretation for the South

- ▶ problems in the small or the least productive firms sized 20+ → problems for the micro-firms.
- ▶ closing a half of the gap in allocative efficiency towards DE → increase in the aggregate productivity in FR manufacturing by 15%.
- ▶ closing only half of the gap in unweighted productivity towards FR → IT and ES achieve the FR level of aggregate productivity (at the current level of allocative efficiency).

# Results

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## Business structure and financial ratios

	Germany	France	Italy	Spain
<b>Dependence on external finance</b>	high	low	high	low
<b>Solvency</b>	high	high	low	high
<b>Interest cover</b>	high	very high	low	moderate
<b>Liquidity</b>	very high	high	very high	Low
<b>Credit/collection period</b>	short	moderate	long	long
<b>Profitability</b>	high	high	low	moderate
<b>Productivity</b>	high	moderate	moderate	low
<b>Dispersion of productivity</b>	high	low	moderate	high

# Results

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- ▶ Comparison of median employment of the 25% most productive companies relative to the rest
  - ▶ German companies oversized in all sectors
  - ▶ Apart from DE, the majority of manufacturing companies too small to take advantage of the economy of scale
  - ▶ ES and IT: undersized manufacturing firms
  - ▶ Utilities and B2B: undercapitalised and oversized companies with the lowest allocative efficiency

# Results

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- ▶ **Productivity growth decomposition**
  - ▶ Limited impact of the net entry, often negative
  - ▶ Changes in unweighted productivity and reallocation play more important role

# Results

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## What drove productivity before the crisis and after 2008

	Before the crisis		After 2008	
	Unweighted productivity	Reallocation process	Unweighted productivity	Reallocation process
<b>Low-tech</b>	+	+	-	+
<b>Medium-low tech</b>	-	-	-	-
<b>Medium-high</b>	+	+	-	+
<b>High-tech</b>	+	+	-	+
<b>B2B</b>	+	+	+ ↓	+ ↓
<b>IT</b>	+	+	+ ↓	+ ↓

- ▶ The majority of sectors improved the allocative efficiency by about 5 -10 p.p.
- ▶ The largest improvements in allocative efficiency were reported in the sectors with the initially worse allocation



# Results

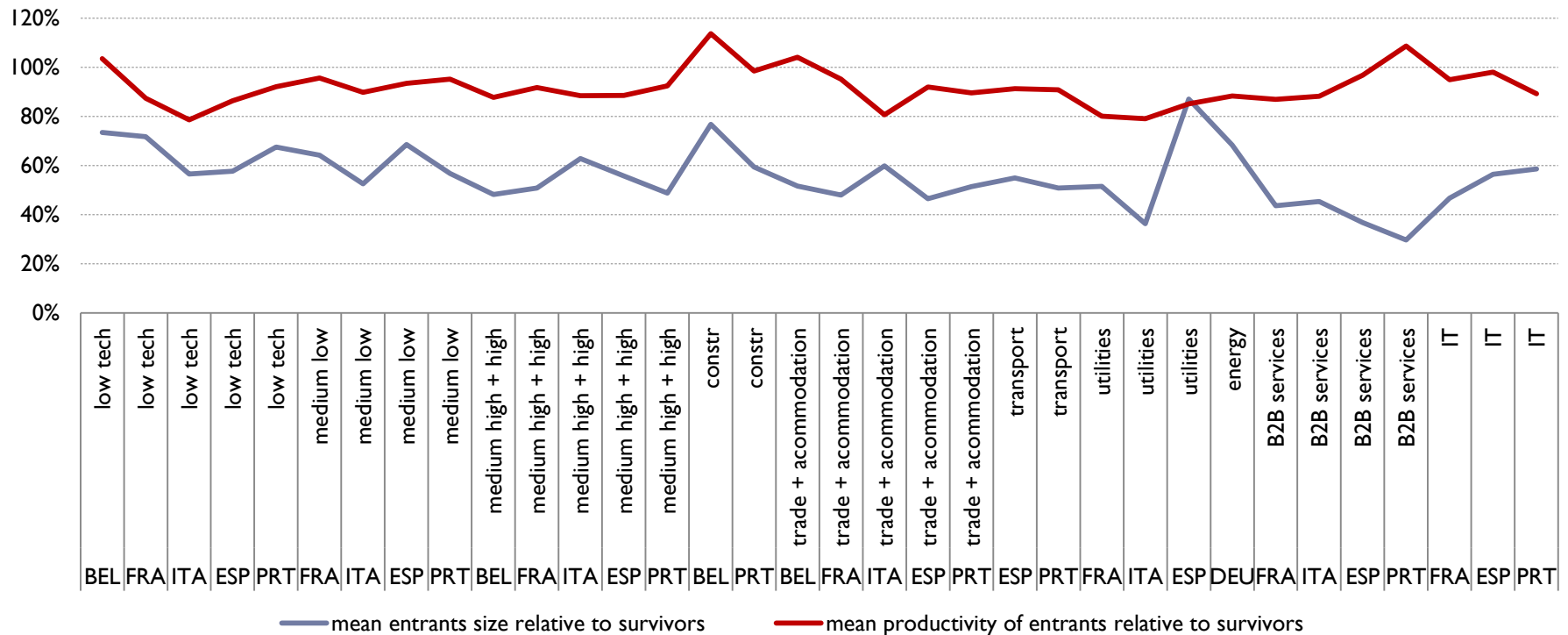
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- ▶ Entrants vs. Survivors
  - ▶ Entrants are smaller in terms of
    - ▶ employment by 1/3
    - ▶ total assets by 2/3 in IT and 1/3 in DE
  - ▶ Entrants are in a worse financial condition, especially in IT and ES
  - ▶ Entrants are less productive
    - ▶ by 1/4 in IT manufacturing,
    - ▶ 1/3 in IT services
    - ▶ in DE and FR the difference equals to 4-8%
  - ▶ Larger increase in labour productivity in case of entrants
  - ▶ Larger increase in employment in case of entrants

# Results

**The entrants were (if at all) only slightly less productive than incumbents, despite their small size...**

Average size and productivity of entrants relative to survivors



# Results

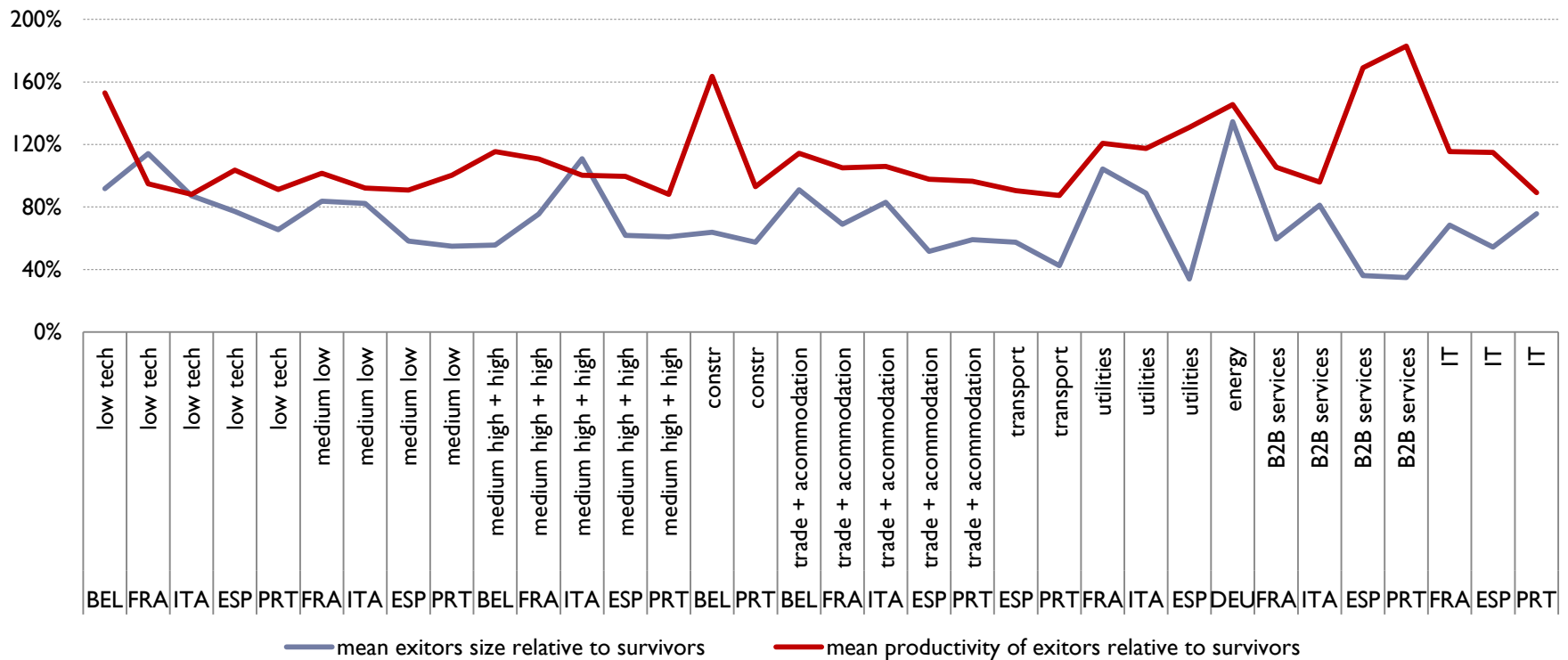
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- ▶ **Exiters vs. Survivors (median characteristics)**
  - ▶ Exiters less productive by 5-20%
  - ▶ Exiters smaller in terms of employment, turnover, assets and capital-intensity
  - ▶ Exiters in a worse financial condition
  - ▶ Selection harsher in manufacturing than services
  - ▶ Exiters differed from survivors the most in ES and IT, the least in FR

# Results

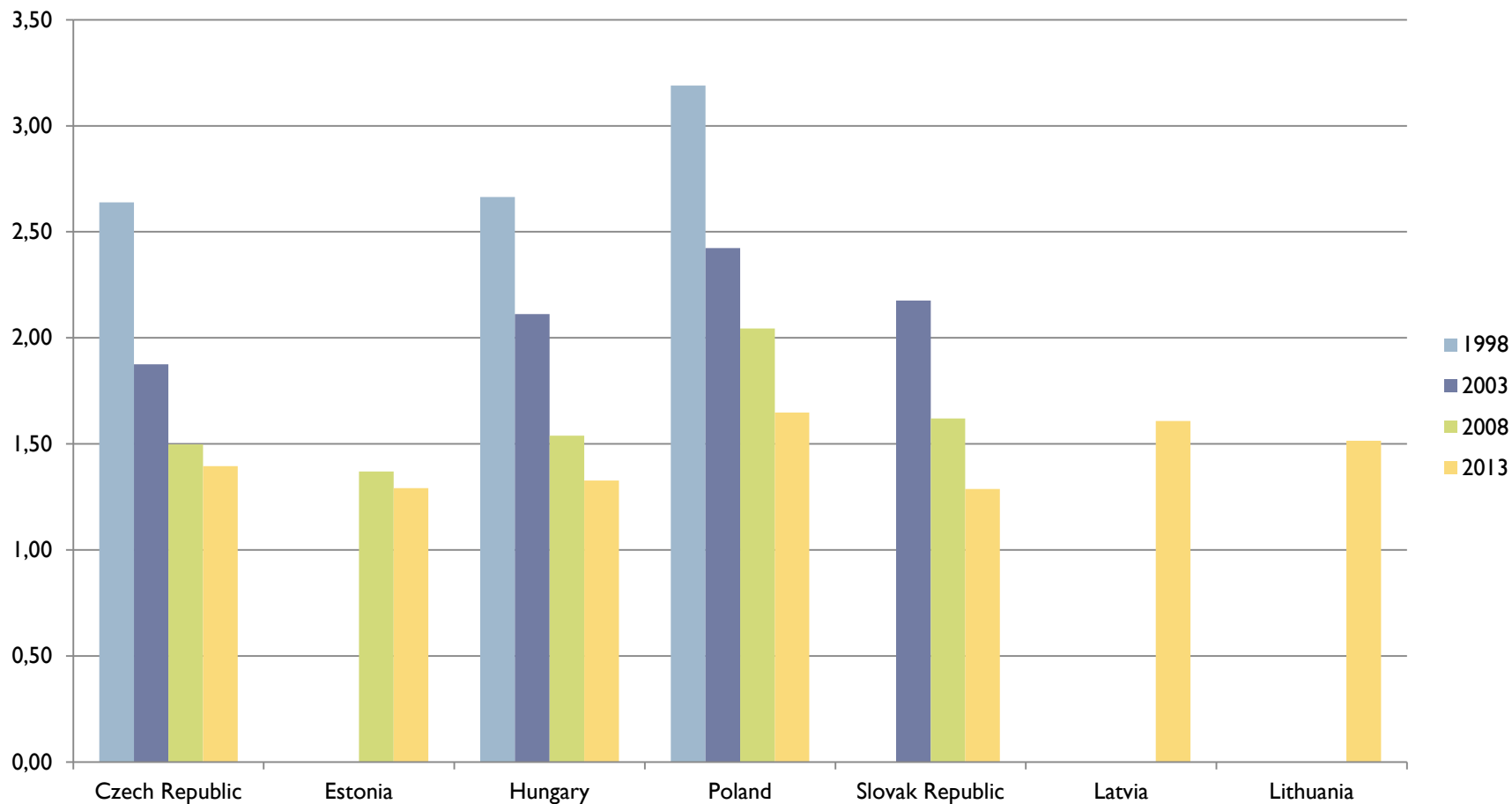
...but market selection seemed to depend rather on the size rather than the productivity, especially in **ESP** and **PRT**

Average size and productivity of exitors relative to survivors



# Case study: Poland

**PMR indicator: total economy**



Source: OECD

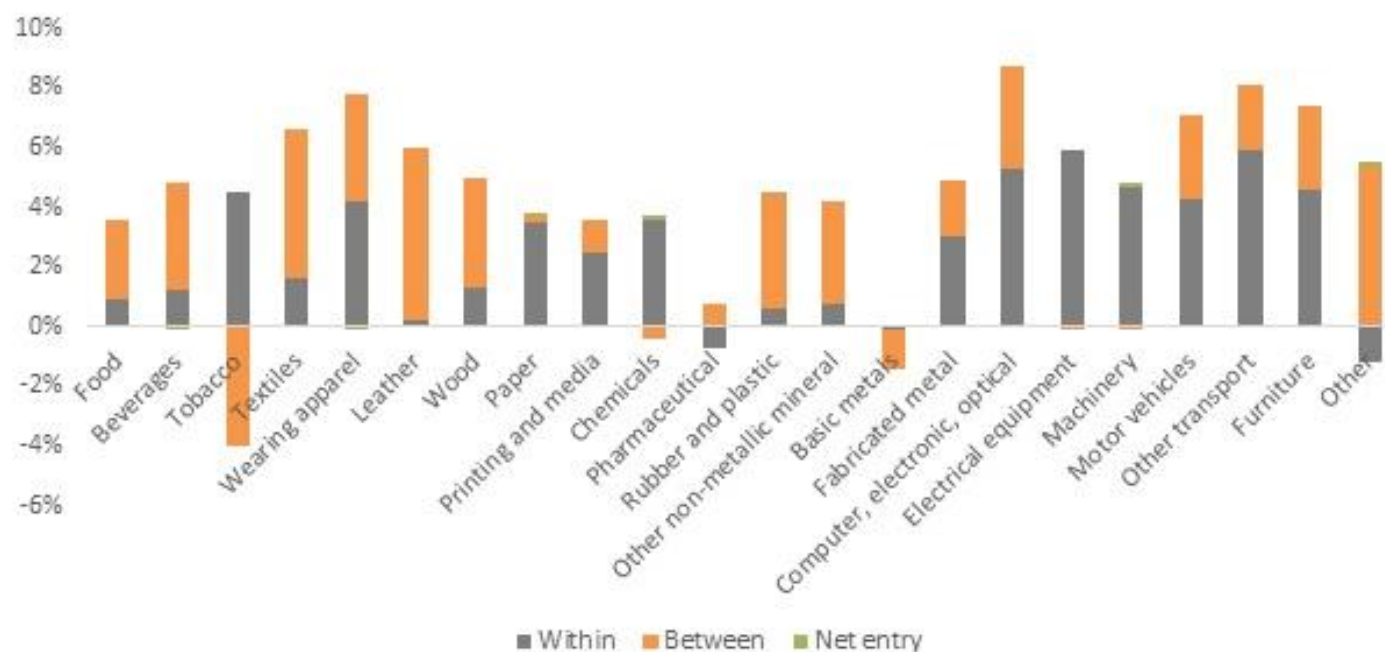
# Case study: Poland

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- ▶ **PMR: sectoral indicators (2013)**
  - ▶ PMR network services: only EE performs worse
  - ▶ PMR retail: the last position in the region
  - ▶ PMR professional services: the last position in the region
    - The indicator is expected to improve due to the deregulation process
- ▶ **Conclusion: much space for improvement**

# Case study: Poland

## TFP decomposition 2005-2013



Source: Project on export competitiveness

# Case study: Poland

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- ▶ In 2005-2013 TFP increased on average by 5% per annum
- ▶ Market mechanisms work well – almost half of the TFP growth was a result of resources reallocation (between-firm effect), one of the highest in the EU in manufacturing
  - positive sign for the future growth and convergence pace
- ▶ Net effect of entrants and exiters is barely observable but slightly positive
- ▶ TFP slightly contributes to export performance (10%:1%)
- ▶ Exporters are 12% more productive than non-exporters
- ▶ Exporters are 3 times larger than non-exporters
- ▶ Exporters pay 20% higher wages than non-exporters



# Case study: Poland

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## How do Polish exporting firms compare?

Criterion	Comparators
Productivity premia	UK, DE, IT
Wage premia*	UK, BE
Size ratio	DE, FR, IT

\* wage premia in DE, IT and FR are lower (by resp. 2, 7, 9%)

Source: Project on export competitiveness

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# Case study: Poland

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## How to improve allocative efficiency → TFP

	OECD average	Poland
<b>Resolving insolvency (duration and cost)</b>	1.7 years, 8.8 %	3 years, 15%
<b>Setting up a company</b>	9.2 days (EE: 18 minutes!)	30 days
<b>Registering property</b>	24 days	33 days
<b>Enforcing contracts</b>	539.5 days	685 days
<b>Getting electricity</b>	76.8 days	161 days

Source: Doing Business 2015

# Case study: Poland

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## To coordinate or not to coordinate reforms?

	No coordination	Joint implementation
<b>Labour productivity in 5ys</b>	- 1.5%	- 1.5%
<b>Labour productivity in 20ys</b>	- 0.5%	0.1%
<b>GDP growth in 5ys</b>	3%	3%
<b>GDP growth in 20ys</b>	13%	15%

Source: Varga and Veld (2014)

# Case study: Poland

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- ▶ Not only entry and exit regulations are crucial
- ▶ Firm size, productivity, innovation and efficiency of the intermediate sectors contribute positively to the export performance
  - ▶ Reduction of barriers to trade, R&D, innovations, firm growing
    - ▶ decrease in innovation costs by 1% → 1.2% increase in firm growth
    - ▶ 1% drop in trade costs → firm size growth by 0.6%
- ▶ Efficient upstream sectors increase efficiency of downstream sectors
  - ▶ Better regulation of network services

# Case study: Poland

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- ▶ Adjustment mechanisms: labour, wages, capital
  - ▶ Size of the companies – changes in employment, innovations
  - ▶ Firing costs
  - ▶ Flexible working hours
  - ▶ Bargaining/EPL
  - ▶ Wage indexation
  - ▶ Licenced professions
  - ▶ Labour flexibility between sectors – towards tradable sectors

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**Thank you for your attention!**