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Consequences of the crisis: A high-road strategy for Europe

**Harvard Conference: Europe in a Post-Crisis World
Session: Longer term consequences**

Karl Aiginger, Susanne Bärenthaler-Sieber, Johanna Vogel

Harvard, 1. November 2013

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- **Focus: Competitiveness of EU after the crisis relative to US**
 - Based on WWWforEurope project (<http://www.foreurope.eu/>)
 - “Welfare, Wealth and Work” (4 years, FP7)
 - Searching for a new path of development for Europe:
More dynamic, socially inclusive, environmentally sustainable
 - Four years programme, 32 partners (e.g. Ketels, Harvard)
 - Scientific board: Aghion, Arrow, Eichengreen
 - **US Evidence**
 - MIT Project: Production in the Innovation Society, 2013
 - Delgado, Ketels, Porter, Stern, 2012.

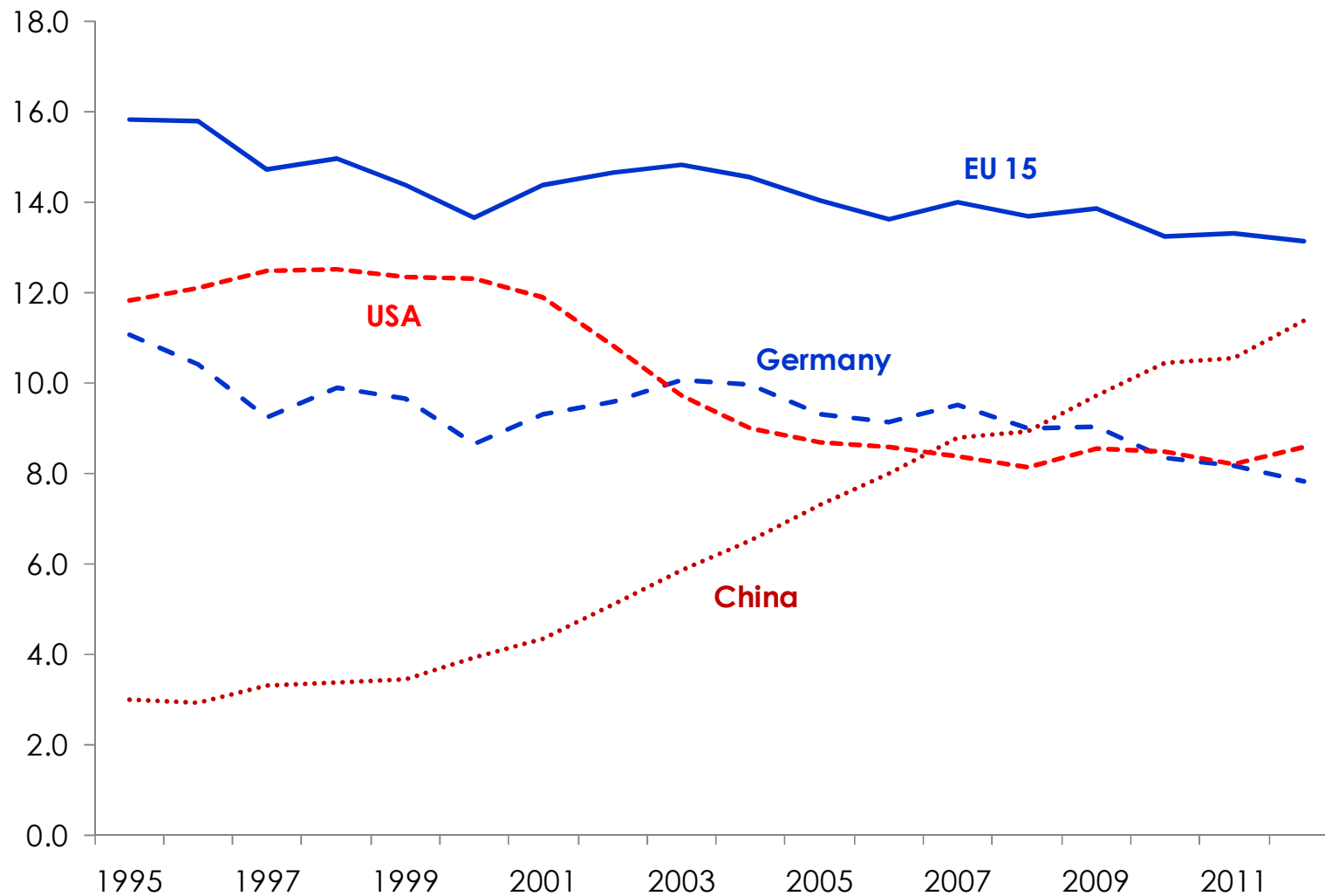
- Lower GDP dynamics (before/after the crisis)
- Less productivity per hour than in US
- Unemployment rising/employment stable
- Smaller public deficits/higher interest rates
- North/South divide
- Catching-up Eastern Europe (integration machine)
- Smaller loss of market shares, no external deficit
- Larger manufacturing sector, stronger Euro.

- **Better Governance (28 countries + 10 applying)**
- **Ex-ante policy coordination**
- **Globalisation strategy, ageing strategy**
- **New strategies for Southern Europe**
- **Vision or abandonment of European Model(s)**

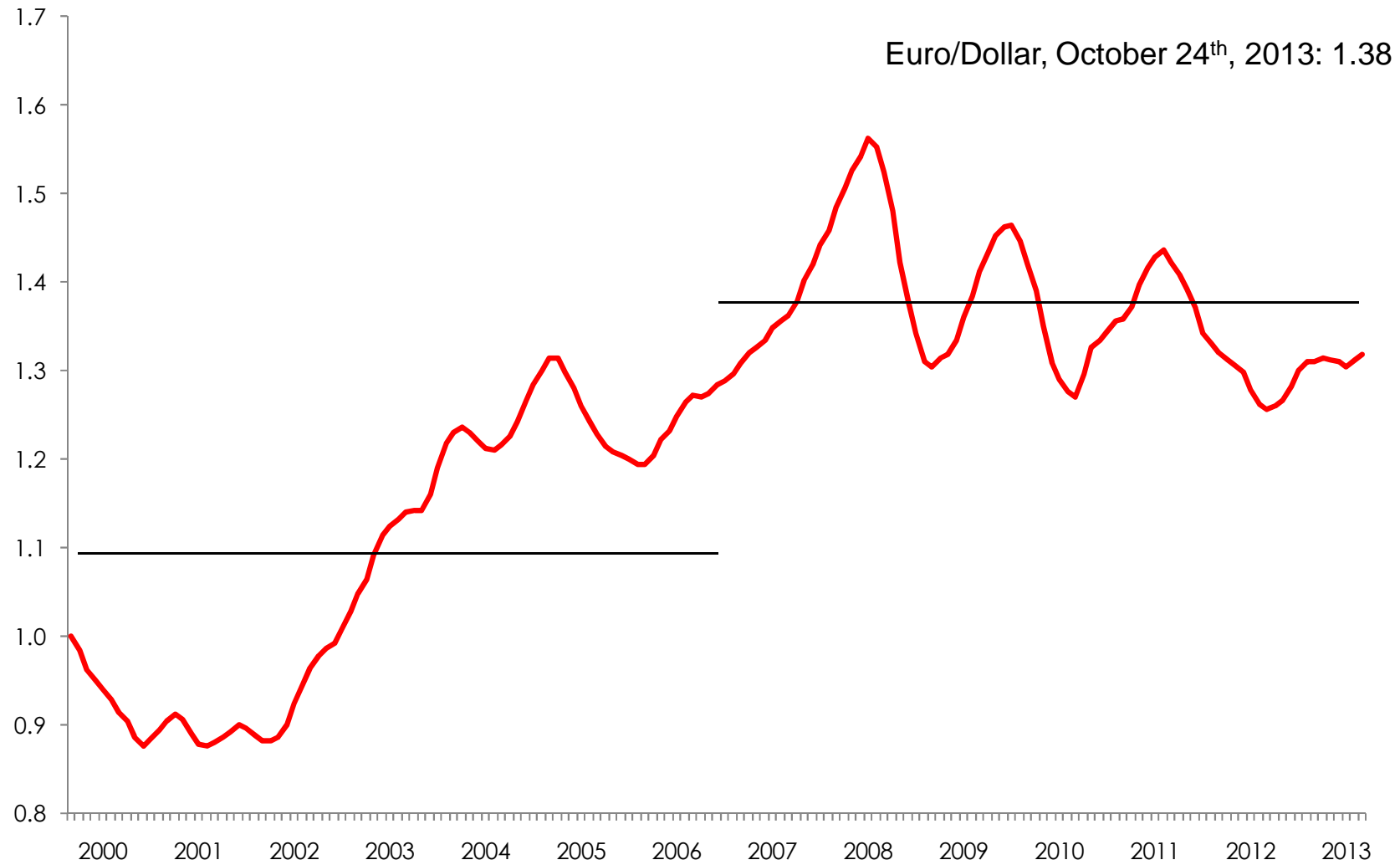
⇒ **Focus: competitiveness for tomorrow in globalizing world.**

Rather stable market shares

Share of exports (in % of world exports)

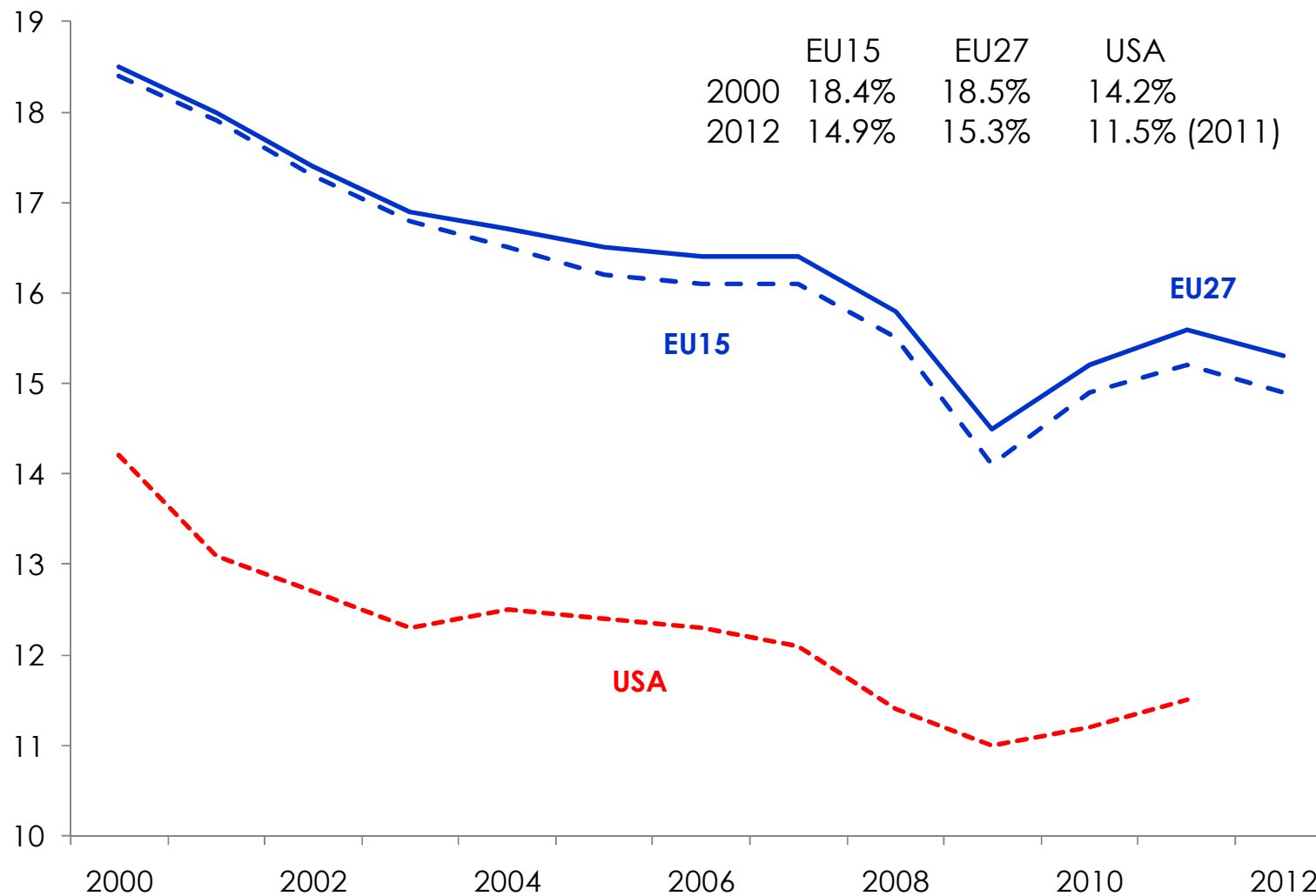


Euro stronger from at start



- **Turning competitiveness into a meaningful concept**
- **Capabilities and structure as drivers of competitiveness**
- **Results measured by Beyond GDP goals**
- **Competitiveness and reindustrialization debate**
- **Summary**

The share of manufacturing in GDP decreased (at current prices)



Competitiveness

- An old term, never well defined, persistently used
- In different connotations: for firms, regions, countries
- Not derived from theory, “misleading and dangerous”

⇒ **Price competitiveness:**

primitive version = low costs

enlightened version = low unit labor costs.

1. Price competitiveness

Factor input costs, productivity (*Porter 1990*)

2. Quality competitiveness

Structure of production/exports, country capabilities

3. Outcome competitiveness

Generating incomes and employment (*European Commission 1998*)

4. Outcome measured by Beyond GDP goals (WWWforEurope)

⇒ **Competitiveness: ability of an economy to provide long-run goals**

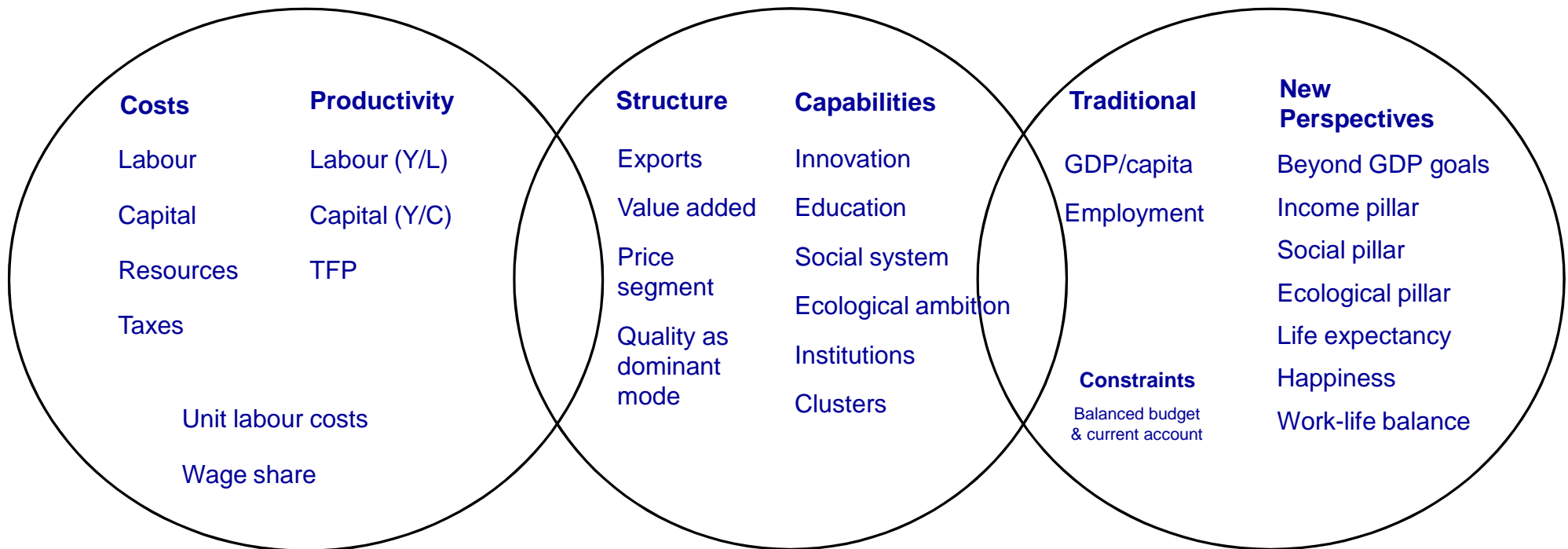
⇒ **Beyond GDP goals: Income, social, ecological pillar.**

Competitiveness in a nutshell

Price competitiveness

Quality competitiveness

Outcome competitiveness



Input-oriented evaluation



Outcome-oriented evaluation

“Ability of a country/region to deliver beyond-GDP goals for its citizens”

➤ Outcome competitiveness under new perspectives

Similar to OECD Better Life Index indicators

- *Income pillar* = disposable household income, consumption expenditure...
- *Social pillar* = poverty rates, inequality indicators, youth unemployment...
- *Ecological pillar* = resource productivity, CO2 emissions intensity...

➤ Input competitiveness

- *Price* = wages, productivity, unit labour costs
- *Structure* = shares of high-tech/high-skill industries in VA & exports...
- *Capabilities* = R&D investment, higher education attainment, active labour market policy expenditures, governance, recycling/organic farming shares...

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Five groups of capabilities

- Innovation
- Education
- Institutions
- Ecological ambition
- Social capital

⇒ **Input competitiveness is driven by capabilities and structure.**

- Technology-driven industries (vs. labour intensive industries etc.)
- Skill-intensive industries (high skills vs. low skills)
- Industries with quality competition (vs. price competition)
- Industries based on knowledge service
- Eco industries

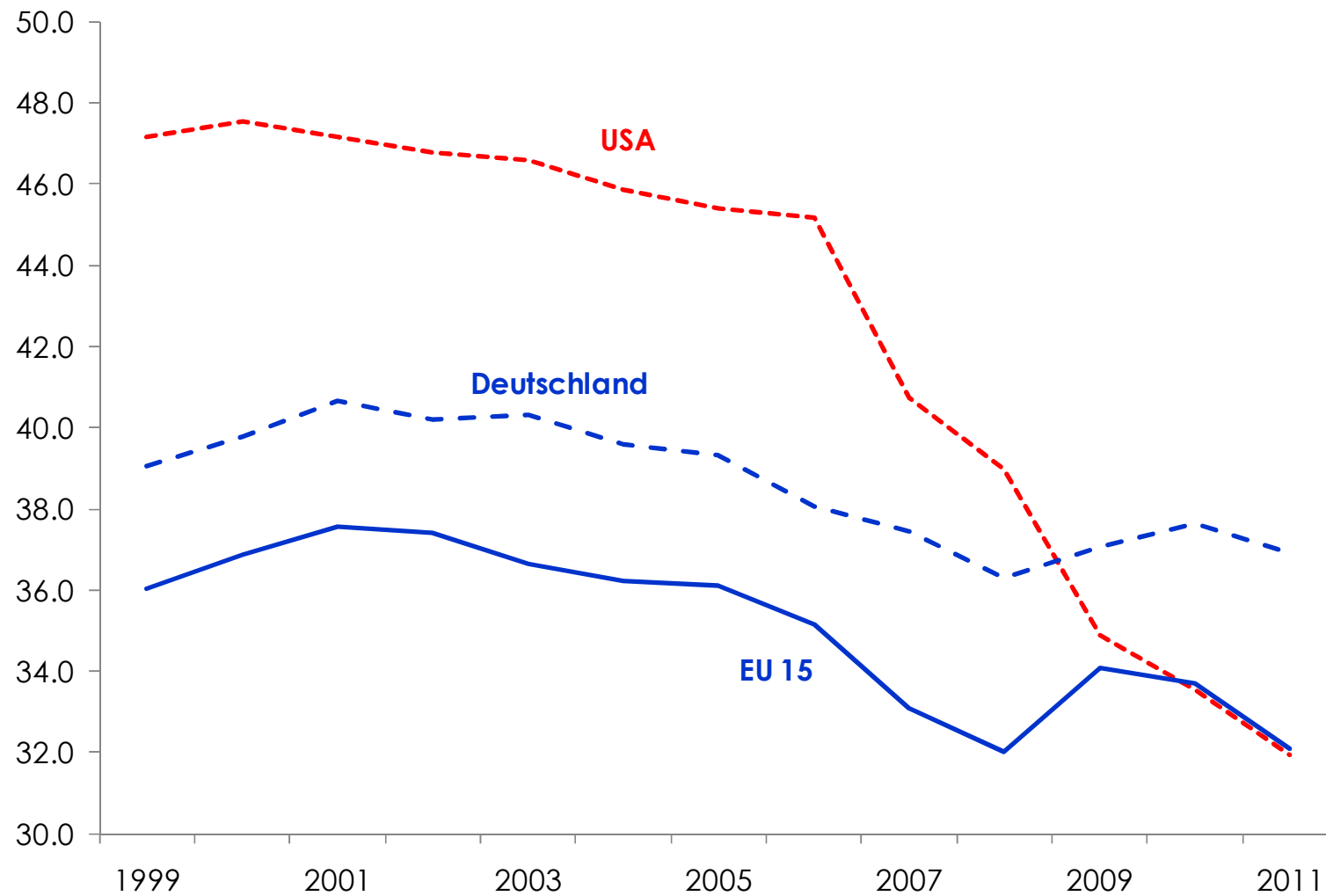
⇒ **Industrial structure is analysed according to share of most sophisticated segment.**

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- **US lead in most indicators on innovation**
 - Private R&D double as high as in EU
 - Tertiary education (attainment, quality)
- **US leads in entrepreneurship, risk capital**
- **Europe leads in:**
 - ❖ Eco patents, share of MST-students
 - ❖ Pre-school education, vocational training
 - ❖ Investments more in active labor market policy
 - ❖ Social ambitions (retraining)
 - ❖ Ecological ambitions (taxing, standards).

- **Europe:**
 - Higher **shares** of technology driven high skill exports
 - More than 50% in quality dominated markets
 - Surplus in technologic, skill intensive industries
 - Surplus in quality dominated markets
- **US:**
 - Large current account deficit
 - Half of it in technology-driven industries (180 bn €)
 - Active trade balance in energy-intensive industries
 - Higher share in price elastic industries.

Share of technology driven industries in exports



- US lead in the income pillar (less in income per hour)
 - But median wages are stagnant since 1970
- US leads in (low) unemployment, partly at the cost of drop of employment rate
- Europe leads in the ecological outcomes
 - Energy efficiency, low emissions
- US: Large and increasing inequality (Gini, top vs. low)
- High and increasing poverty rate
- Europe: Lower deficits in budget, none in trade.

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W|F○ ■ The US seen as a challenge for Europe

- Energy costs are much lower in the US
 - And falling due to shale gas exploitation & fracking
 - Cheap gas and oil discourage clean energy
 - Energy intensive plants shift to US
 - Labor costs in US flat, cheaper in south by one third
- ⇒ US: cost advantage in labor and energy threatens EU strategy.

- To stay competitive with the US, Europe has to **match US in energy prices**
- This is wrong since it sets limits to:
 - Higher taxes/standards
 - Reestablishment of emission trading
 - Progress of alternative energies
 - Lead in sustainability.

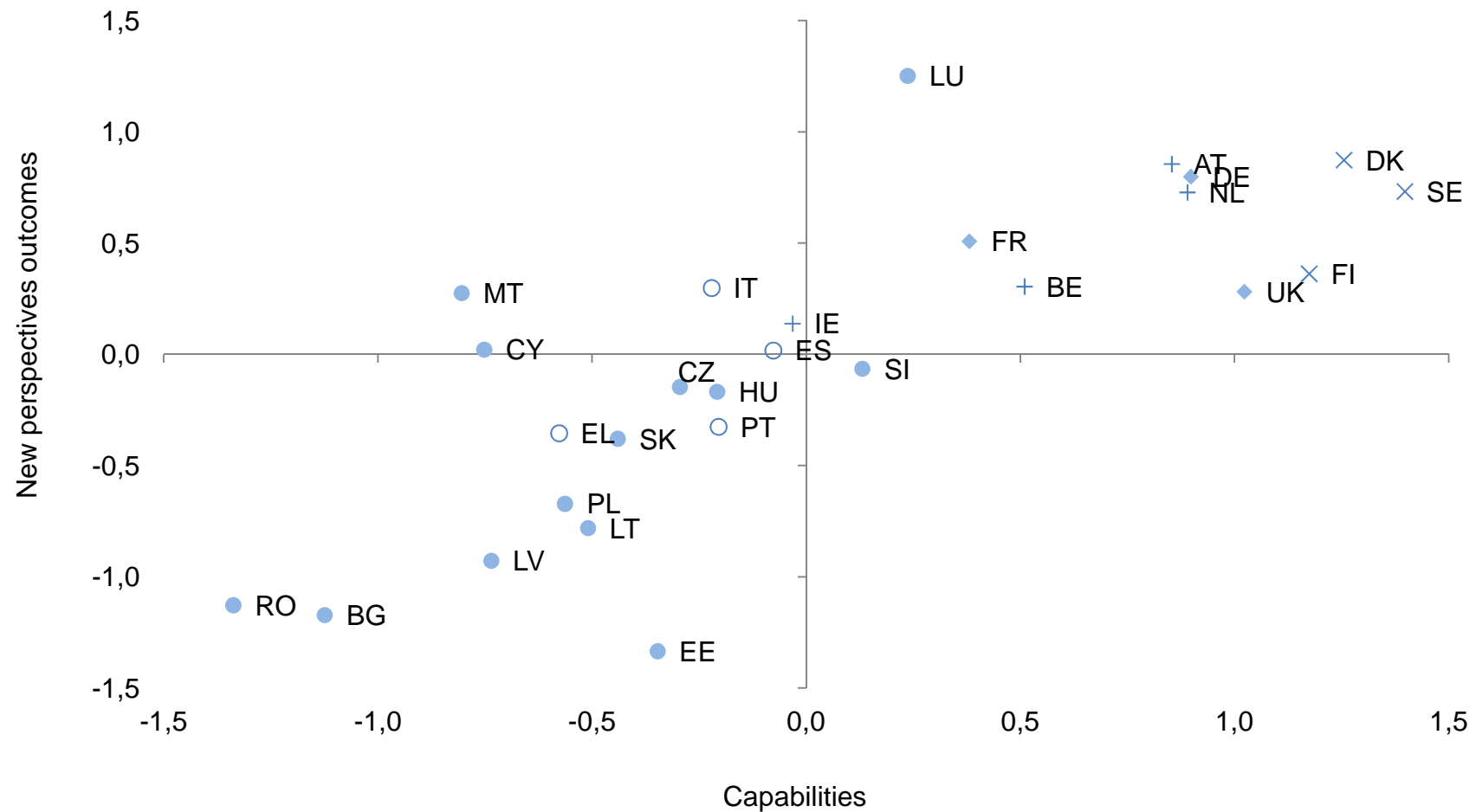
Competitiveness : total costs must **match** total productivity

- If costs of energy are higher (4% of total costs rel. to 2%)
 - This can be compensated this by:
 - Boosting energy efficiency
 - Higher innovation and education expenditures
 - Or better efficiency of innovation and education system.
- ⇒ Europe is lagging US in R&D and higher education
- ⇒ **Closing the difference in R&D and higher education is more effective than closing gap in energy price.**

- US firms currently “home alone”
 - Forced by finance in wrong direction
 - Industrial centers less based on externalities
- US has to copy elements of European system
- 'Rebuilding' industrial ecosystem, complementarities
- Convening, coordination, risk pooling, bridging
- Vocational schools and community colleagues
- ⇒ MIT proposes US firms to go for cooperation
 - Both with other firms, community.

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New perspectives outcomes vs. capabilities



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- “Competitiveness” for frontier countries should not be obtained through low costs (or unit costs)
- Drivers: Capabilities and structure
- Ability to deliver societal goals.

⇒ Results:

"Competitiveness is ability of a country to provide welfare (measured by Beyond GDP goals)".

W|F○ ■ The two roads ahead for the US and EU

■ Low road path:

- Competing by low wages, low prices for energy

■ High road path:

- Climbing up the quality ladder: education, innovation
- Providing capabilities, “new” industrial policy
- Convening, coordination, risk pooling & reduction, bridging
- Consider societal goals in industrial strategy.

⇒ Hopefully the MIT-project will help the US to take the high road

⇒ And Europe does not follow the "lower labor costs/lower energy costs" model.

- Governance problems persist (28+), north/south divide
- Deficit in innovation, universities, entrepreneurship
- Less dynamics in GDP; rising median wages
- Less inequality, higher ecological priority
- Larger share of manufacturing
- Smaller decline in world market shares, no external deficit.

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- Outcome competitiveness under new perspectives:

$$NPO_{it} = \beta_1 Price_{i,t-1} + \beta_2 Structure_{i,t-1} + \beta_3 Capabilities_{i,t-1} + \eta_t + u_{it}$$

...where NPO = New Perspectives Outcomes

- Traditional outcome competitiveness:

$$TO_{it} = \beta_1 Price_{i,t-1} + \beta_2 Structure_{i,t-1} + \beta_3 Capabilities_{i,t-1} + \eta_t + u_{it}$$

...where TO = Traditional Outcomes

- Traditional outcomes = GDP per capita, (un)employment
- Constraints = deficit, debt, current account not persistently off-balance

- Overall, data on 68 indicators (27 countries, 2000-2010).

- **Principal components factor analysis (PCFA)**
 - Examine *correlation and fit* of indicators in each group
 - Extract main statistical information via *first common factor*
- Use **factor loadings** to construct **composite indicators** for each group
 - NPO, TO
 - Price (wages), structure, capabilities
 - Innovation, education, social, institutions, ecological ambition
- **Panel data estimation methods**
 - OLS, WG (country-specific fixed effects)
 - Generated regressors → bootstrap standard errors
 - *Endogeneity* → *t-1* on RHS.

First push after 2000

- Decline of manufacturing
- Continued technology lead of US
- Globalization/China

Second push after the crisis

- Weak growth/high unemployment rate
- In Greece and Portugal trade deficit/GDP (at max)
is as large as the share of manufacturing
- Rebalance economy away from finance and property
- Societal challenges (social, ecological, health).

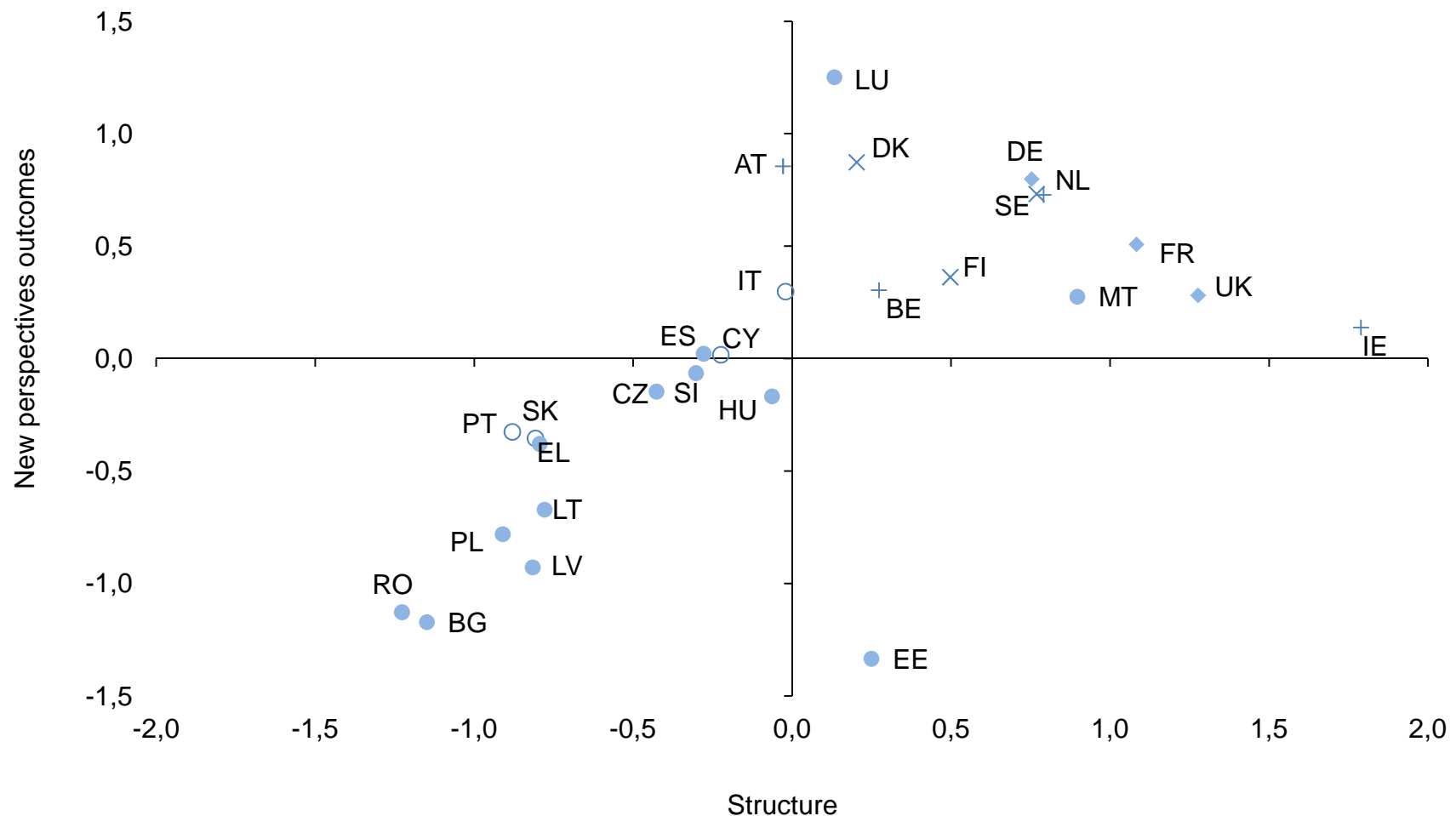
■ Competitiveness rankings

- World Economic Forum, IMD...
- Based on hard data, survey results
- Pro: measure wide range of economic indicators
- Cons: *mix indicators* of input & outcome competitiveness, levels & changes

■ Delgado, Ketels, Porter, Stern (2012)

- GDP/working-age population = function of composite indicators of macro & micro performance, social & political institutions
- 130 countries, 2001-2008
- Find *positive & significant effects*, larger for micro & sipi than for macro
- We focus on *measures of social & environmental outcomes & inputs*

New perspectives outcomes vs. structure



■ Proposed definition

1. Distinguish between “*input*” and “*outcome*” competitiveness
2. Include *social* and *environmental* aspects in both

■ Empirically relate outcome to input competitiveness

- EU vs. US
- EU countries

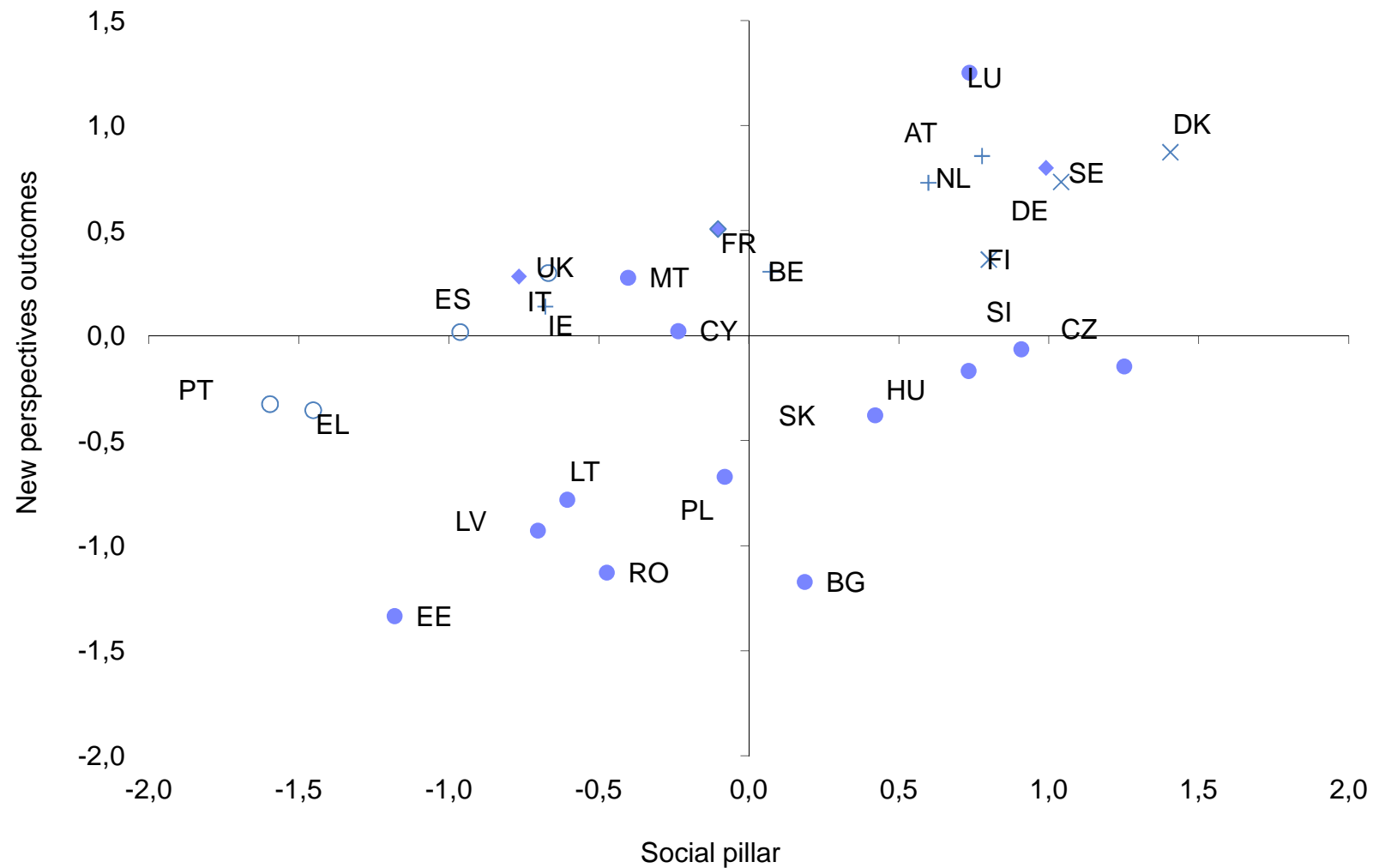
■ Outcomes

- 3 pillars: *income, social, environmental* indicators

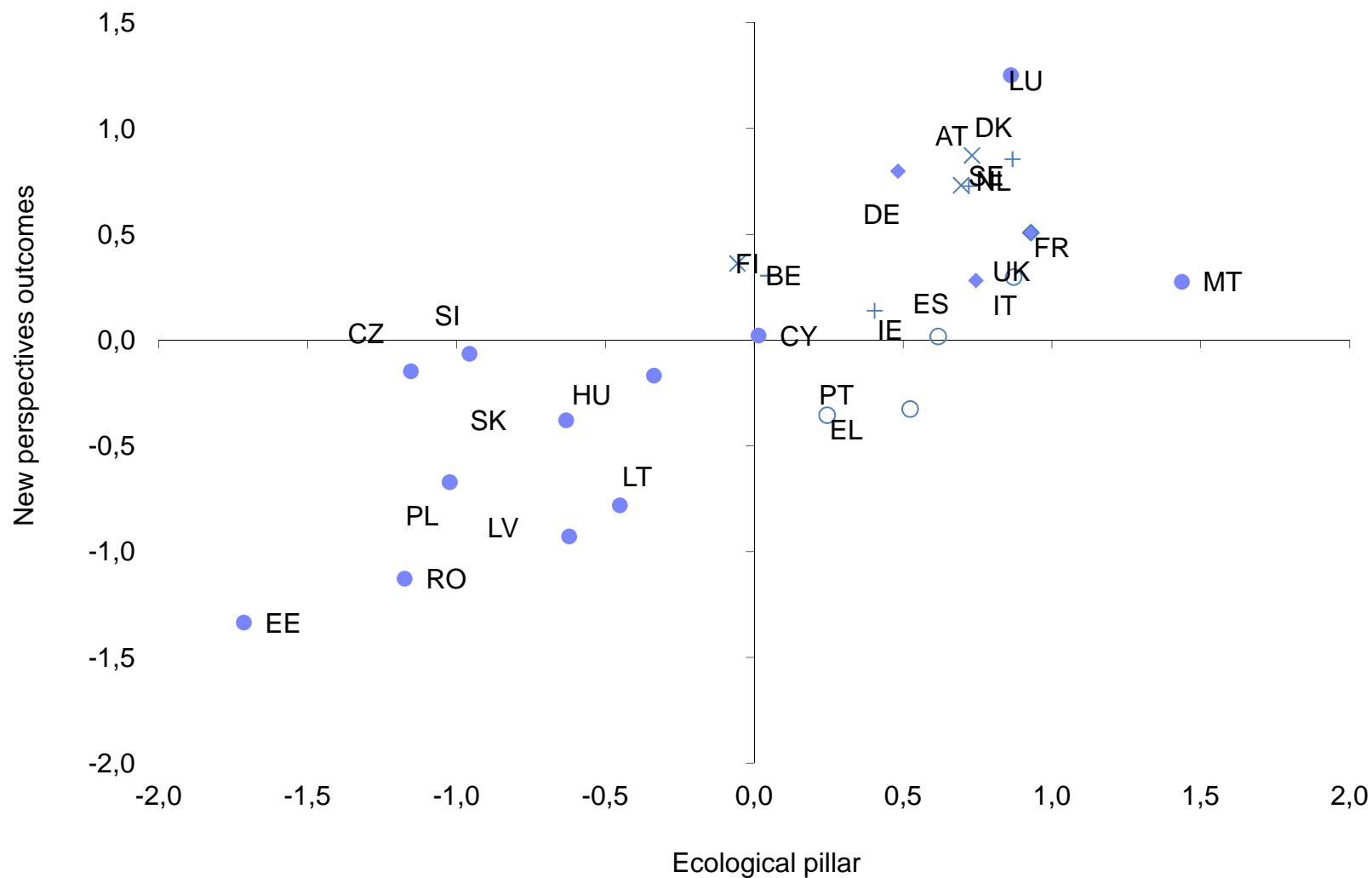
■ Inputs (determinants)

- Indicators on *price, economic structure, capabilities*
- *Capabilities* = innovation, education, social system, institutions, environment.

New perspectives outcomes vs. social pillar



New perspectives outcomes vs. ecological pillar



- Reaction to slow growth (EU), large deficits (US)
- “Producing” is a necessary basis of the economy
- Less bubbles than finance, construction, housing
- If production is relocated, services/R&D follow

⇒ Looking for the role of industrialized countries in globalization.