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EUROSYSTEM

# Crowding-Out or Mutual Co-Existence? Competitive Position of EU Members and China in the Global Market

Konstantins Benkovskis, Maria Silgoner, Katharina Steiner, Julia Wörz  
*Workshop on Effects of International Linkages and Trade*  
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## Introduction



Integration of China felt mainly through "cheap" imports:

- Positive effects (consumer welfare, cheap intermediate inputs)
- But at the same time rising competition for European producers
  - in their domestic markets
  - in their export markets

We look for evidence that Chinese producers are "crowding-out" European producers from serving their traditional export markets.

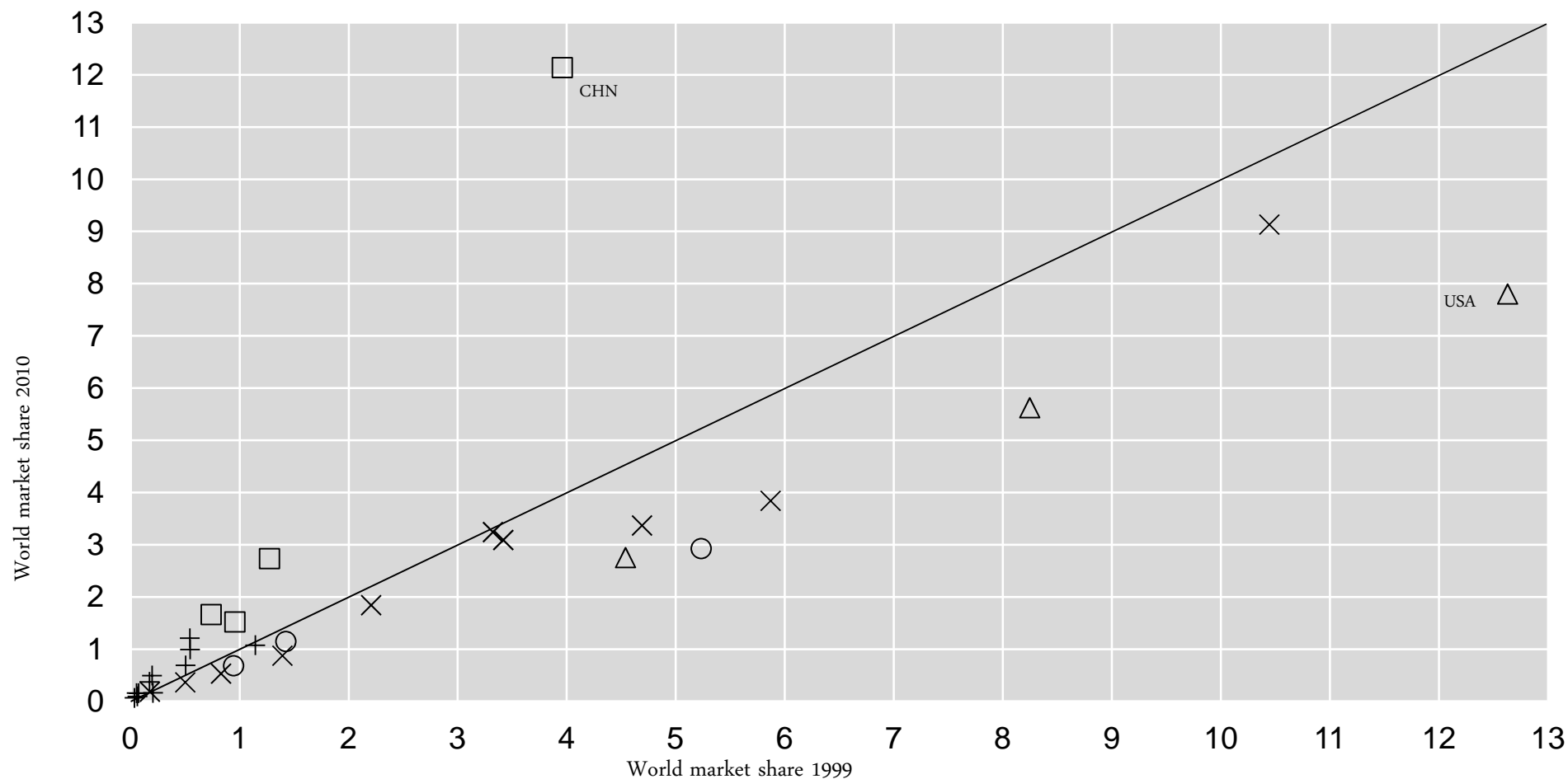
## Overview

- Data
- Fishing in the same pool? → export market shares
- Signs of Crowding-out? → dynamic trade link analysis
- Exploration versus intensification? → intensive vs extensive margin growth
- Conclusions

## Data

- UN COMTRADE
- HS 1996 , 6-digit level (5132 products)
- 75 importers & exporters (>95% of world trade in 2011)
- Focus on 27 EU members and China
- Sample period: 1999-2011
  - Covers entire period since China's WTO accession
  - Includes EU Eastern enlargement in 2004
  - Includes global trade collapse in 2009

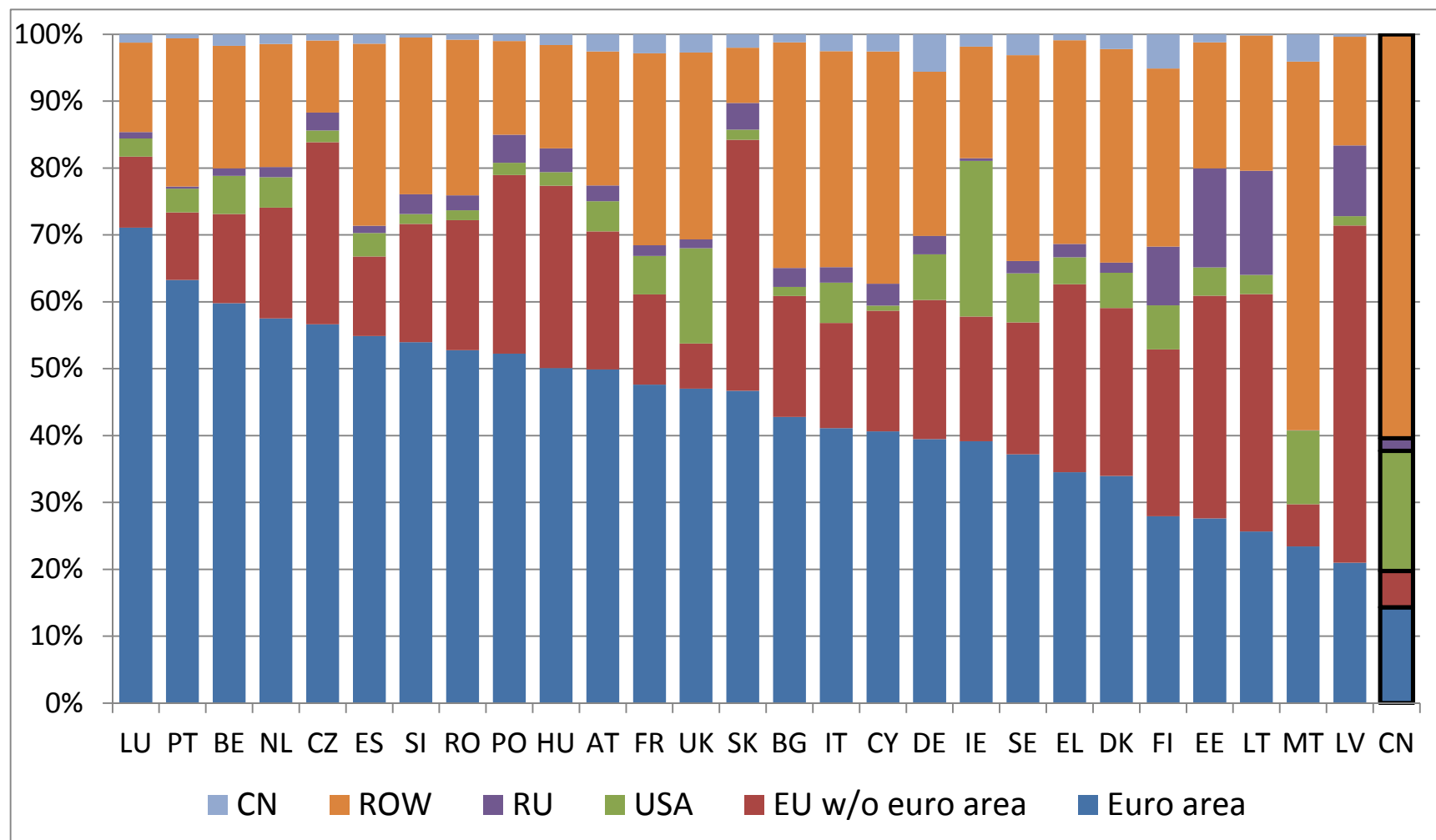
## Change in world market share



Source: UN\_COMTRADE.

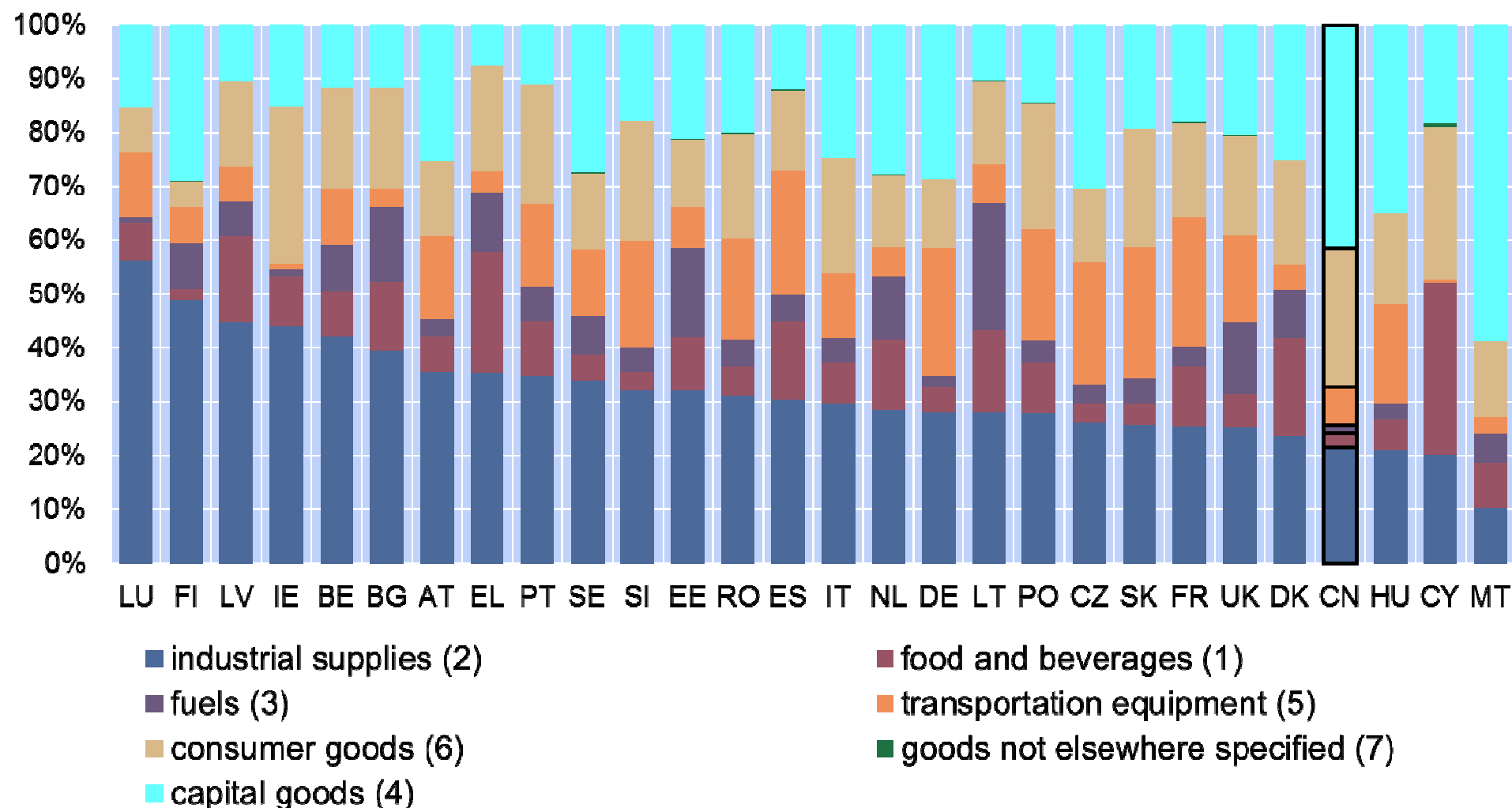
Note: X Euro area as of Jan. 2004; + New EU member states; O UK, Denmark, Sweden; Δ Canada, Japan, USA; □ BRIC

## Export destinations



## Sectoral export structure

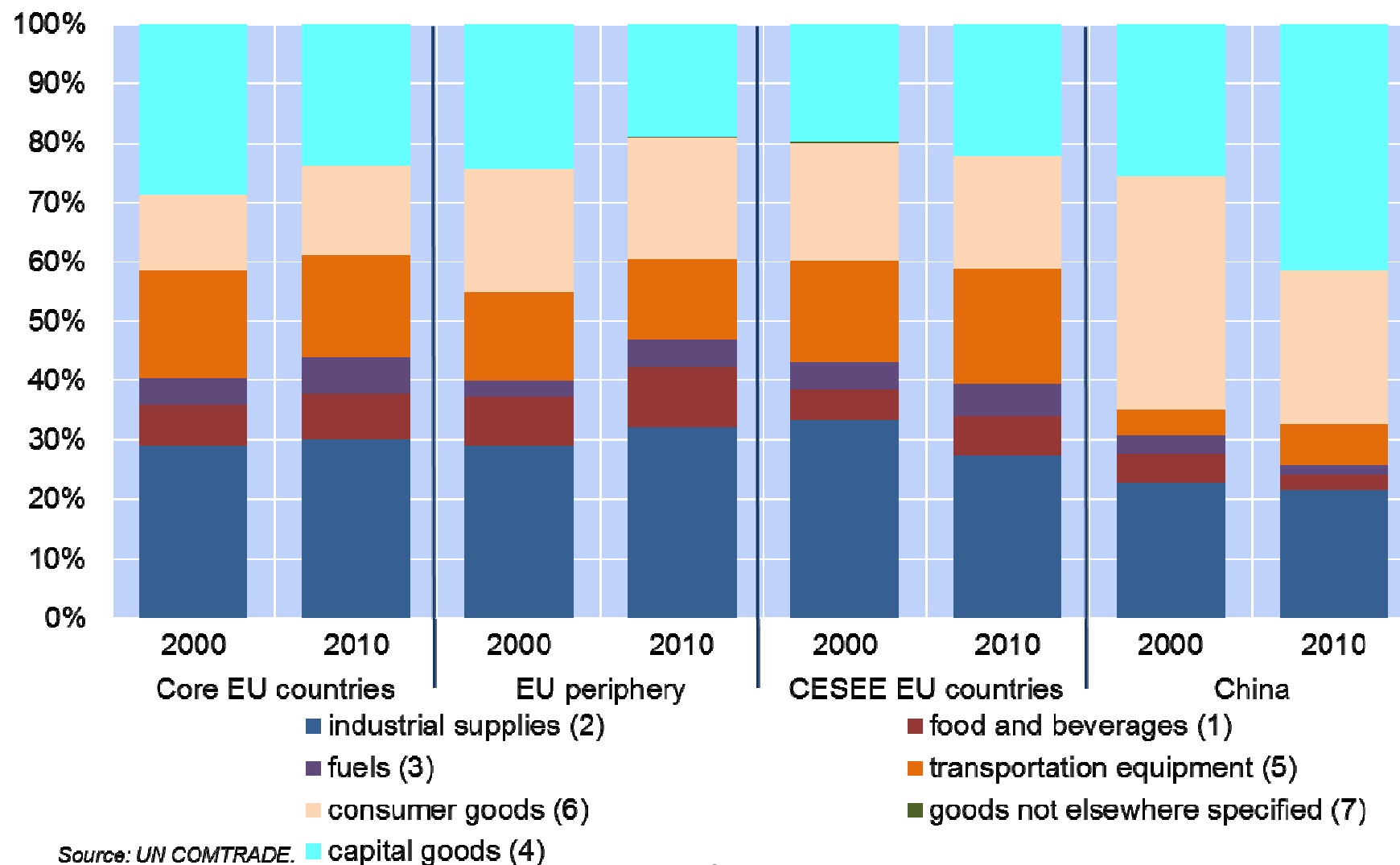
Share of product category in total exports, 2010



Source: UN Comtrade.

# Change in sectoral export structure

Share of product category in total exports, 2000 and 2010



Source: UN COMTRADE.



## Market share analysis 1

- China has tripled its world market share since 1999 to 12%
- Distinct export patterns between EU members and China in regional and sectoral terms
- Most EU members export predominantly to other EU members, China is not (yet) an important export destination for EU countries
- China is regionally more diversified
- Industrial supplies dominate EU exports
- China has moved from exporting primarily consumption goods towards exporting predominantly capital goods

## Market share analysis 2

	Most important category in 2010	Rising / falling importance	World market share
Core EU	Industrial supplies Capital goods	+ ind.supplies, cons - capital, transport	dropped
CESEE	Industrial supplies Consumption goods Transport equ.	+ capital, transport	rose
EU periphery	Industrial supplies Consumption goods	- ind.supplies, cons	dropped
China	Capital goods Consumption goods	+ capital goods - consumption g.	rose

## Dynamic Trade Link Analysis – 1

- **Trade link:** country A exports product X to country B

Year 1	Year 2	Europe
1	1	ACTIVE
0	0	INACTIVE
0	1	ENTRY
1	0	EXIT

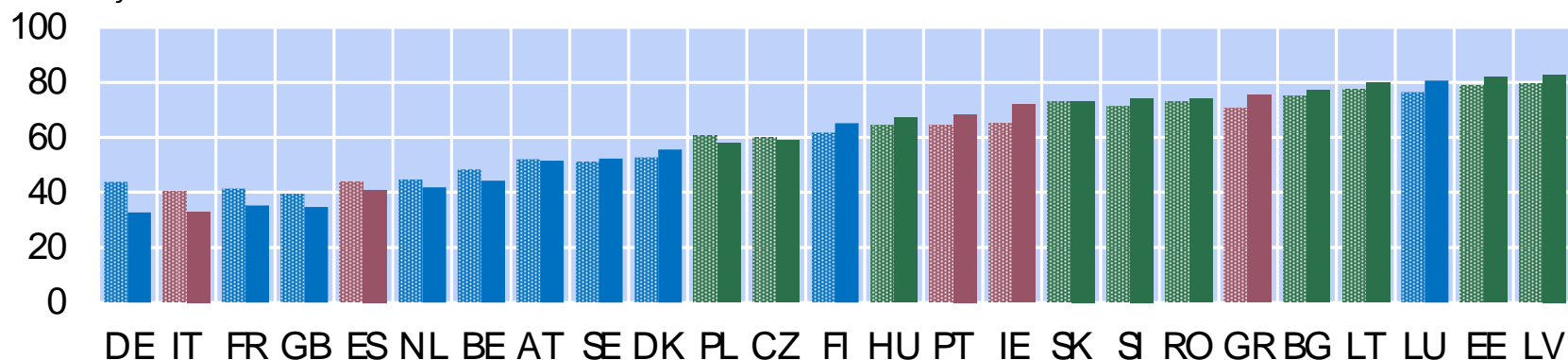
- **Survival** of trade link over at least two years
- **At least one** of the partners is **active** in that market
- **Only third-country markets**
- **Number** of trade links (not value)

## Dynamic Trade Link Analysis – 2

Combinations	Type of competitive pressure
ACTIVE-inactive INACTIVE-active	No competition

## No Competition (ACTIVE-inactive, INACTIVE-active)

in % of all trade links

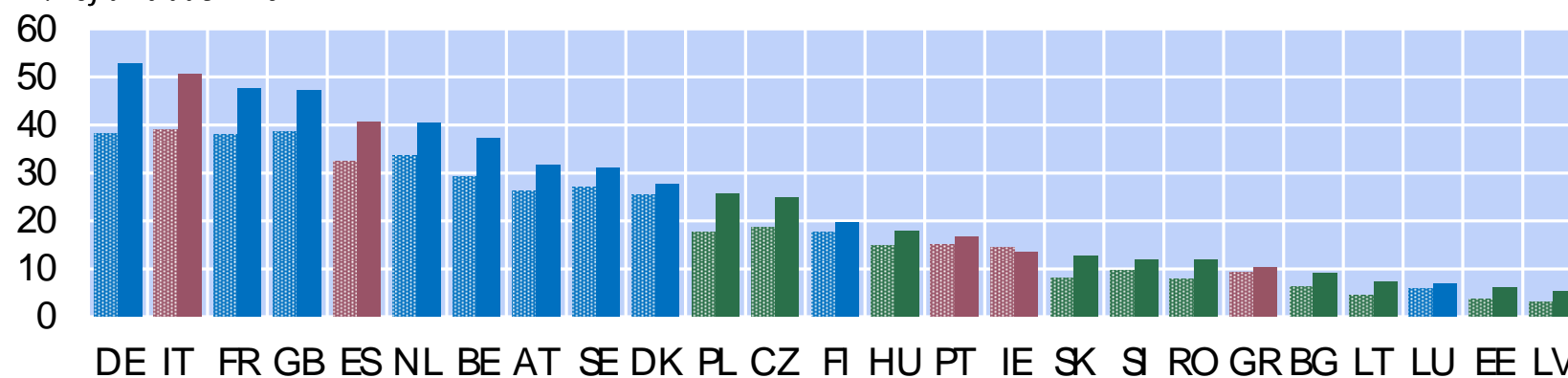


Source: UN COMTRADE, own calculations.

Shaded bars = 2001; solid bars = 2009.

## Existing Competition (ACTIVE-active)

in % of all trade links

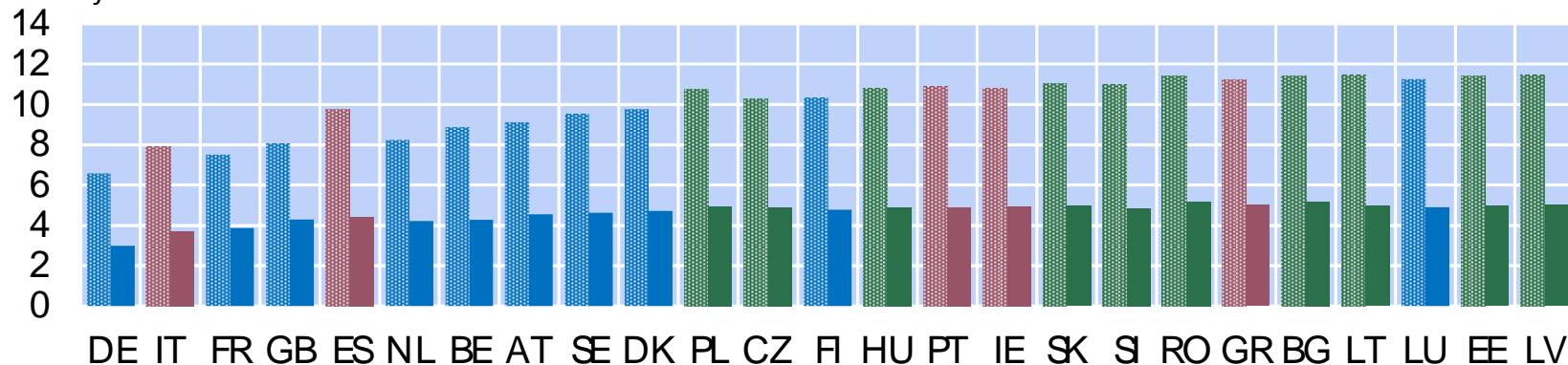


Source: UN COMTRADE, own calculations.

Shaded bars = 2001; solid bars = 2009.

## Conquering New Markets (*ENTRY-inactive, INACTIVE-entry*)

in % of all trade links

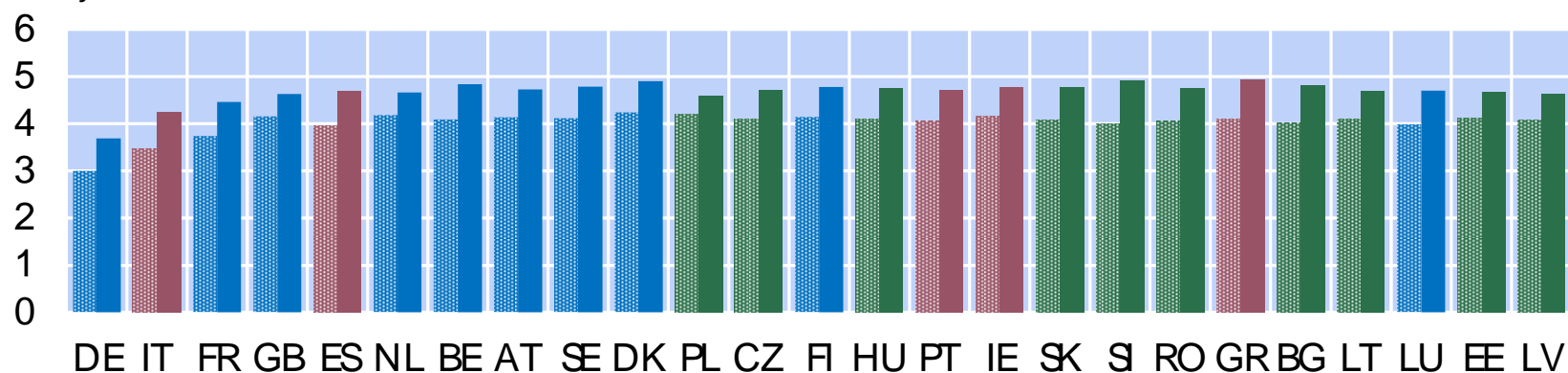


Source: UN COMTRADE, own calculations.

Shaded bars = 2001; solid bars = 2009.

## Leaving Unpromising Markets (*EXIT-inactive, INACTIVE-exit, EXIT-exit*)

in % of all trade links

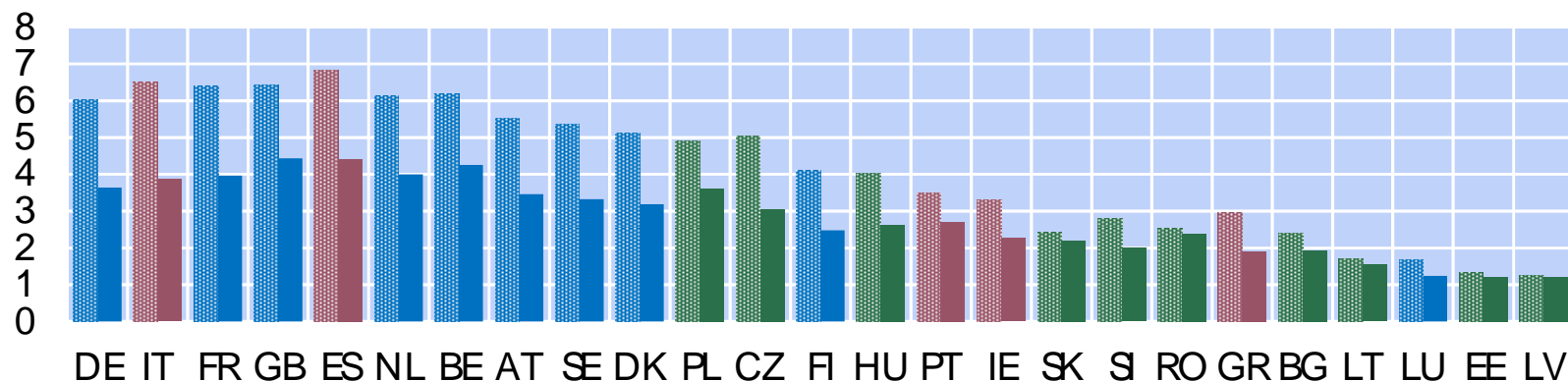


Source: UN COMTRADE, own calculations.

Shaded bars = 2001; solid bars = 2009.

## New Competition (ACTIVE-entry, ENTRY-active, ENTRY-entry)

in % of all trade links

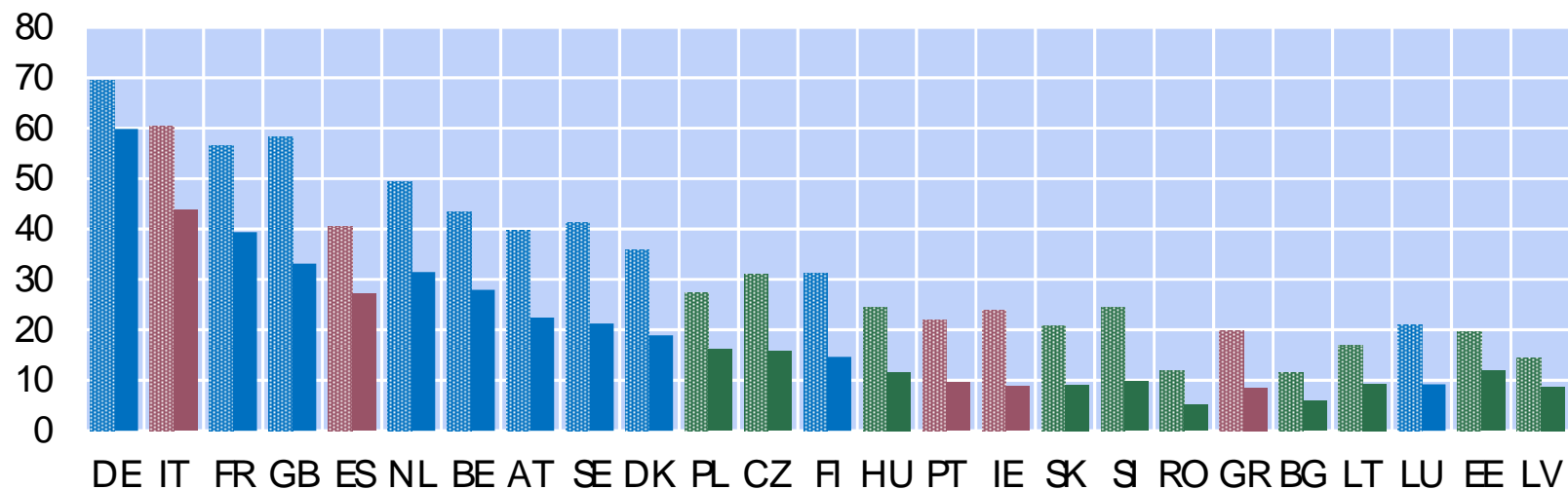


Source: UN COMTRADE, own calculations.

Shaded bars = 2001; solid bars = 2009.

## Bilateral Competition: New competition from China

in % of "new competition" trade links

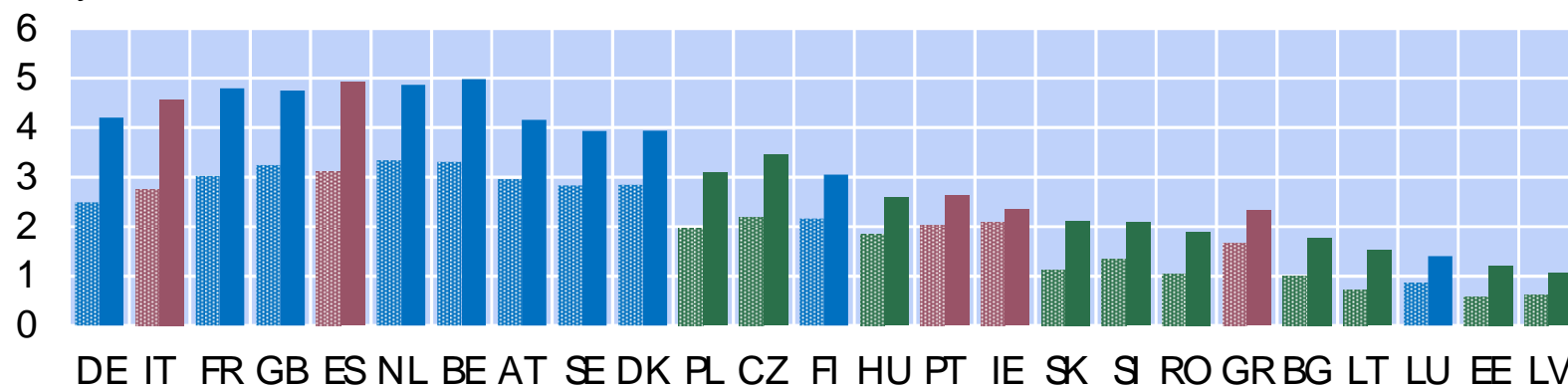


Source: UN COMTRADE, own calculations.

Shaded bars = 2001; solid bars = 2009.

## Crowding Out (EXIT-active, EXIT-entry, ACTIVE-exit, ENTRY-exit)

in % of all trade links

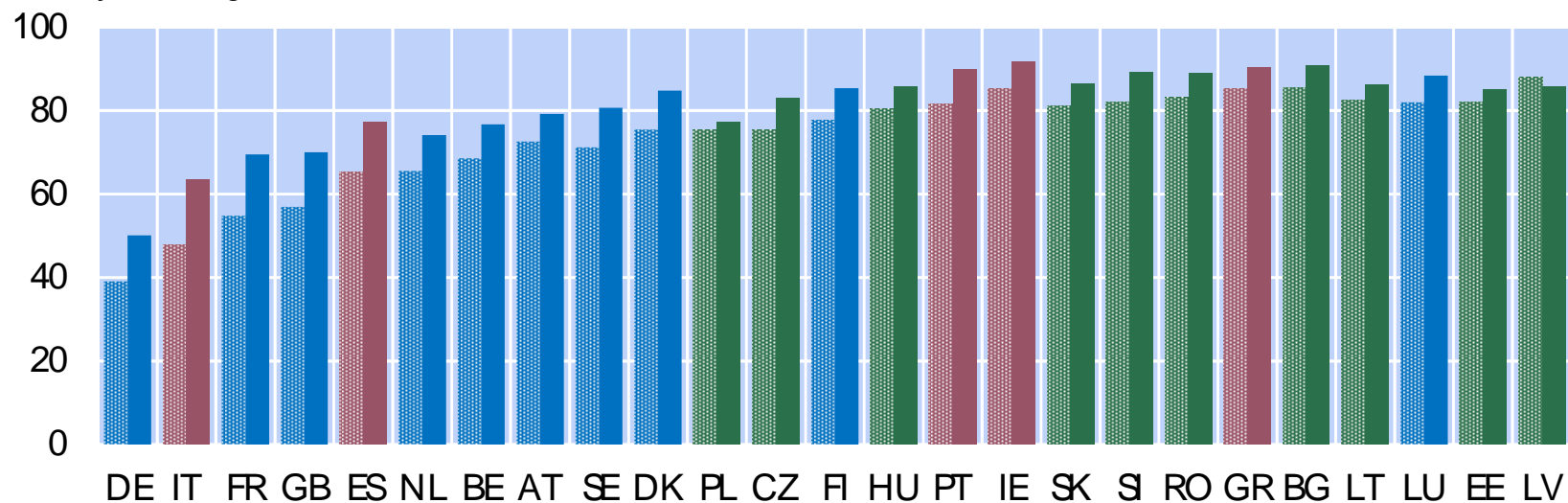


Source: UN COMTRADE, own calculations.

Shaded bars = 2001; solid bars = 2009.

## Bilateral Competition: Crowding out by China

in % of "crowding out" trade links

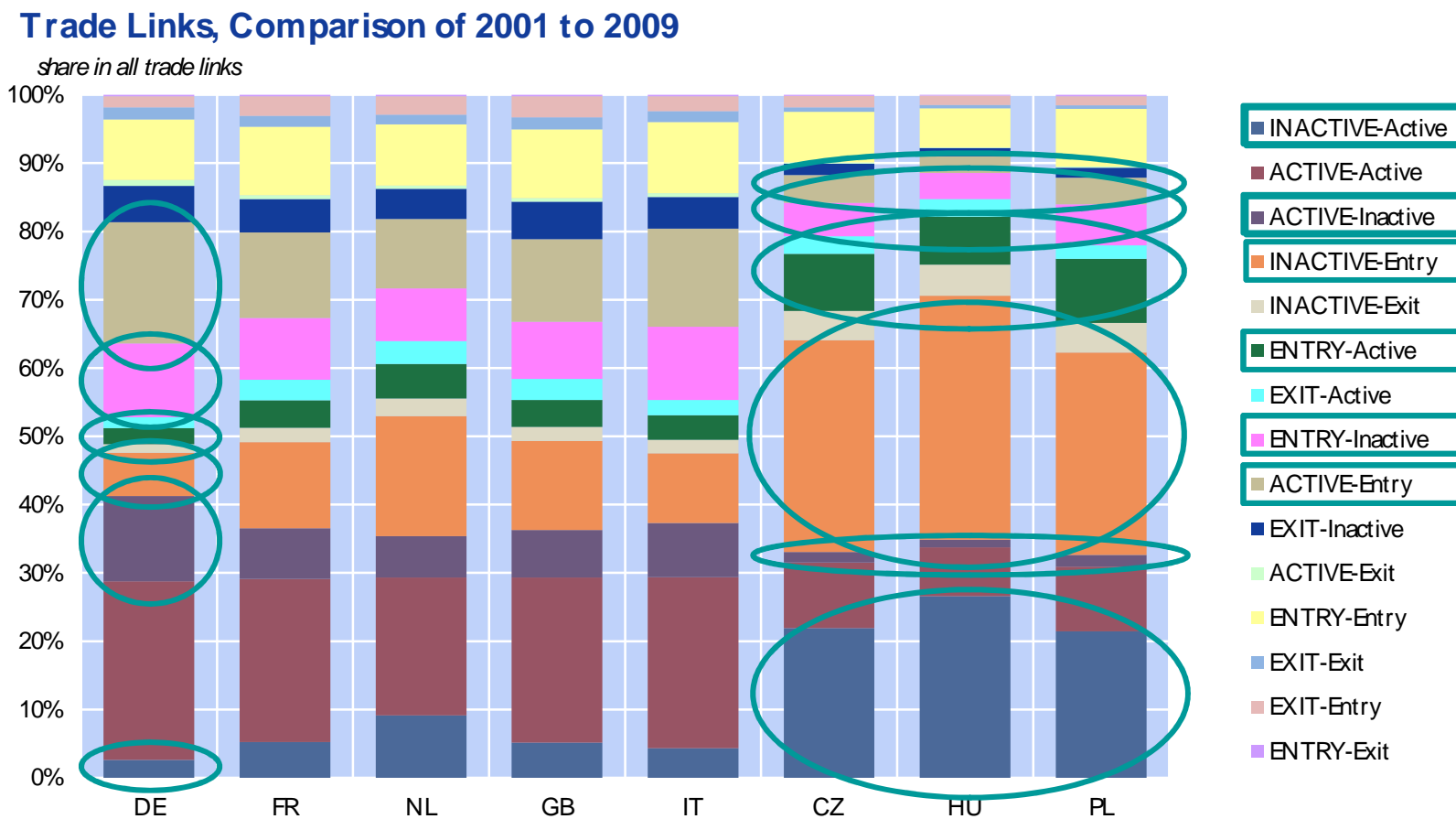


Source: UN COMTRADE, own calculations.

Shaded bars = 2001; solid bars = 2009.



# Dynamic Trade Link Analysis - all combinations



Source: UN COMTRADE, own calculations

## Dynamic Trade Link Analysis

- Only about 50% of all potential trade links are served by at least one competitor, but great variation between countries (DE – 30%; LV – 70%)
- Intensity of competition with China varies greatly by EU member
- Countries with large overlap with China in terms of served trade links are large countries and show increase in competition
- Declining entry rates into entirely new markets
- Very small fraction of trade links are given up after 2-years
- Crowding out is particularly pronounced between large EU countries (DE, IT, FR, GB, ES, NL, BE) and China
- Often, these EU countries crowd out China!

## Extensive vs intensive margin export growth

- Opening up new trade links (= extensive margin growth) lays the foundation for deepening of existing trade links (= intensive margin growth)
- Split export growth into growth of existing varieties and the ratio of new to lost varieties
- Based on Feenstra's (1994) variety index (see Amiti and Freund 2010, Benkovskis 2012)
- Remember: trade link is combination of product \* destination market

## Extensive vs intensive margin export growth

- Extensive margin:

$$EM_t = \frac{\sum_c \sum_{g \in G_t} X_{c,g,t}}{\sum_c \sum_{g \in G_{t-1}} X_{c,g,t}} \frac{\sum_c \sum_{g \in G_{t,t-1}} X_{c,g,t-1}}{\sum_c \sum_{g \in G_{t-1}} X_{c,g,t-1}}$$

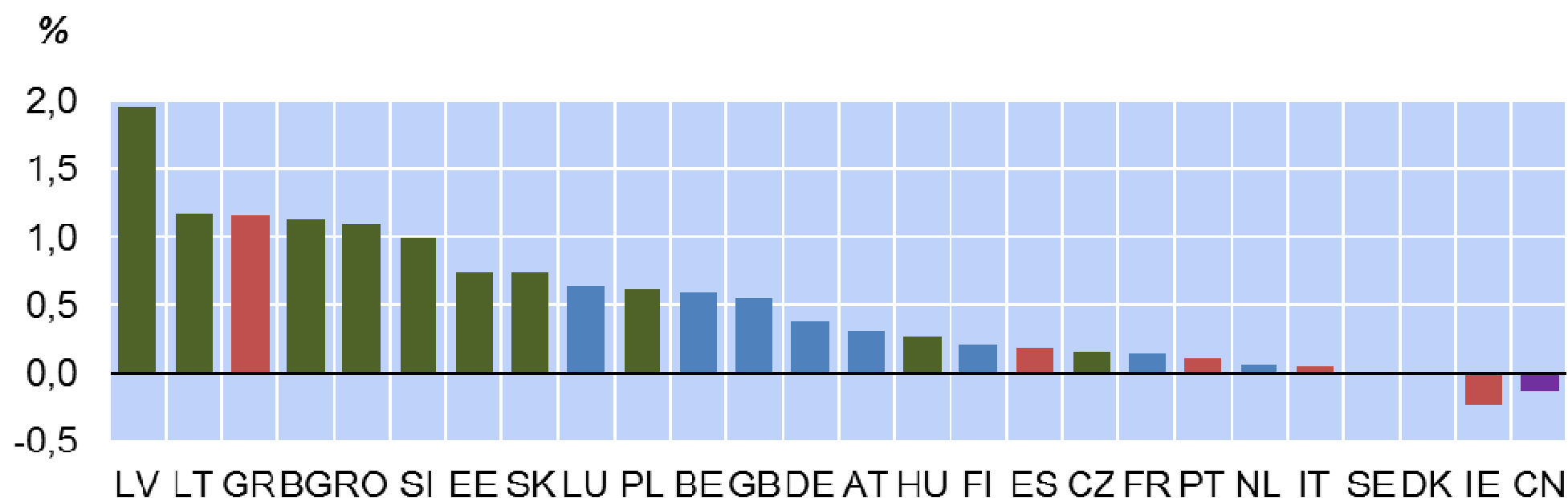
- Intensive margin:

$$IM_t = \frac{\sum_c \sum_{g \in G_{t,t-1}} X_{c,g,t}}{\sum_c \sum_{g \in G_{t,t-1}} X_{c,g,t-1}}$$

- Both multiply to total trade growth:

$$\frac{\sum_c \sum_{g \in G_t} X_{c,g,t}}{\sum_c \sum_{g \in G_{t-1}} X_{c,g,t-1}}$$

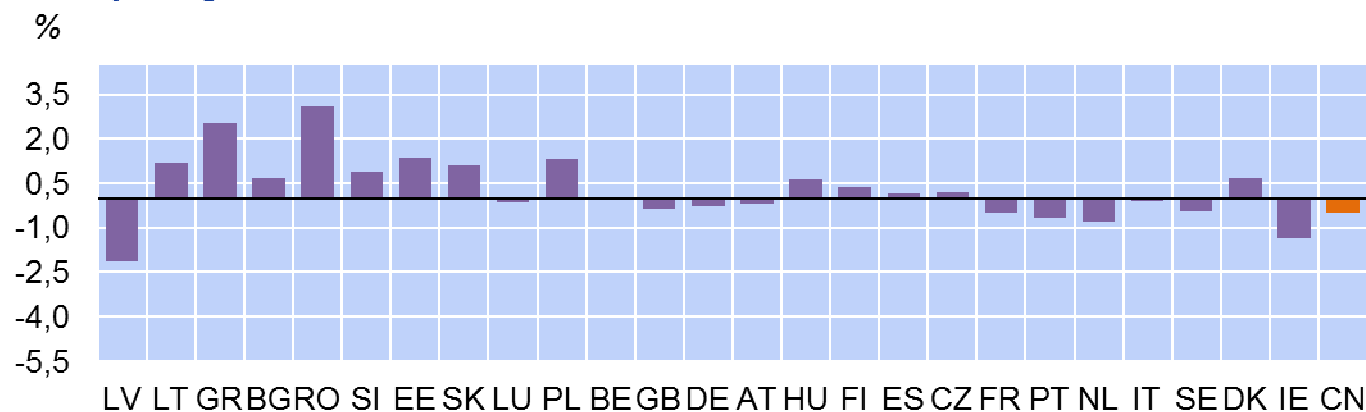
## Average contribution of the extensive margin to total export growth



Source: UN COMTRADE, own calculations.

Average from 2000 - 2010.

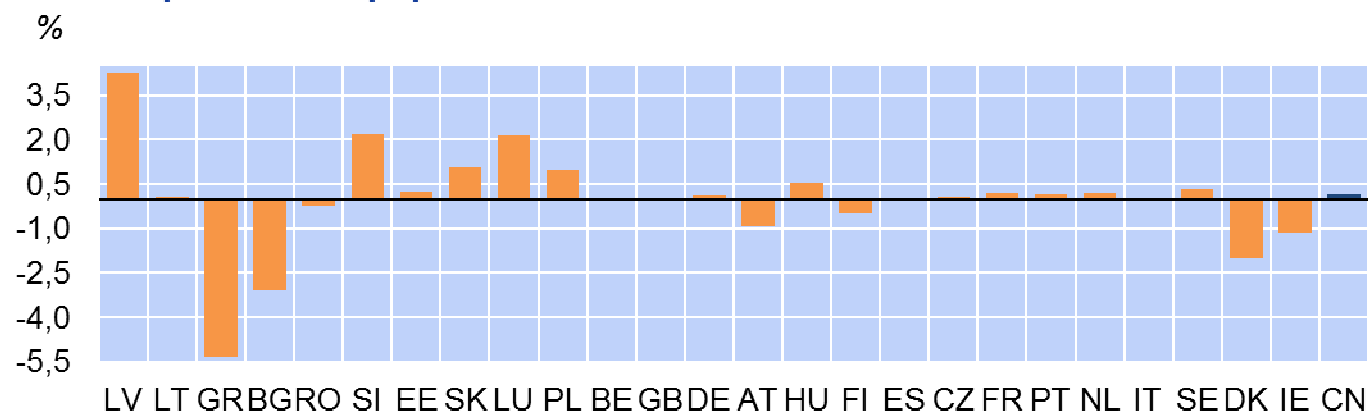
### Average contribution of the extensive margin to export growth of capital goods



Source: UN COMTRADE, own calculations.

Average from 2000 - 2010.

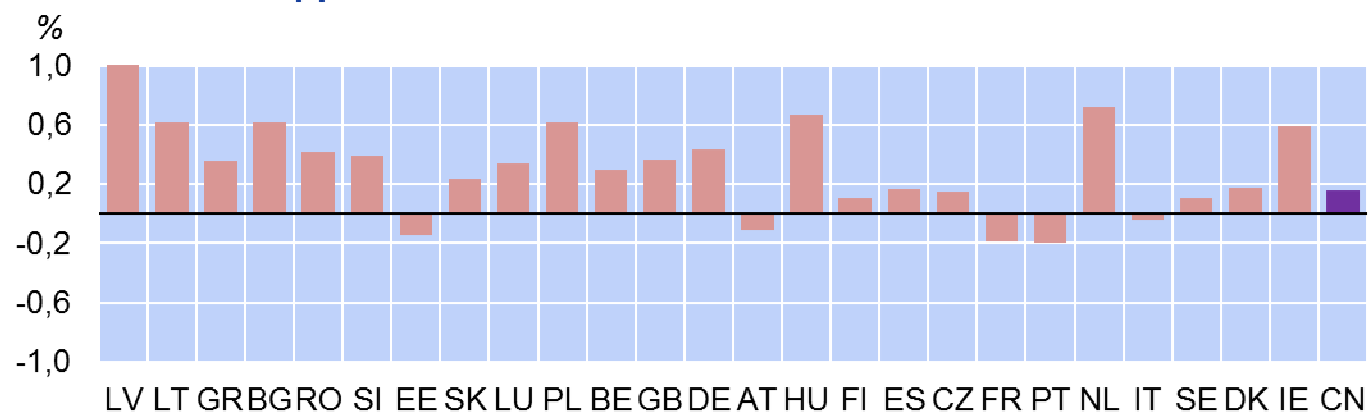
### Average contribution of the extensive margin to export growth of transportation equipment



Source: UN COMTRADE, own calculations.

Average from 2000 - 2010.

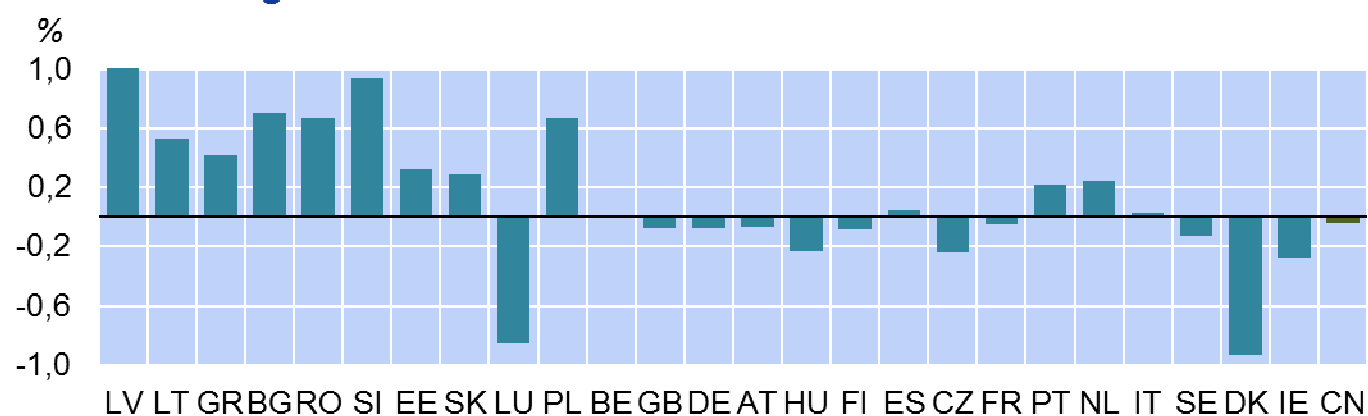
### Average contribution of the extensive margin to export growth of industrial supplies



Source: UN COMTRADE, own calculations.

Average from 2000 - 2010.

### Average contribution of the extensive margin to export growth of consumer goods



Source: UN COMTRADE, own calculations.

Average from 2000 - 2010.

## Conclusions

- Distinct patterns of regional and sectoral trade specialisation between EU members and China
- China increasingly specialises on capital goods and reduces its export variety within this category
- There is still ample room to explore new markets for both, EU members and China
- Large EU members find themselves more often in direct competition to China on individual product markets
- Crowding out is mostly observed between large EU members and China, and in many cases EU members crowd out China!
- Extensive margin trade growth is more important for CESEE, China shows small extensive margin





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