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EUROSYSTEM

Fishing in the same pool? Competitiveness of CESEE and China in the EU-15 Market

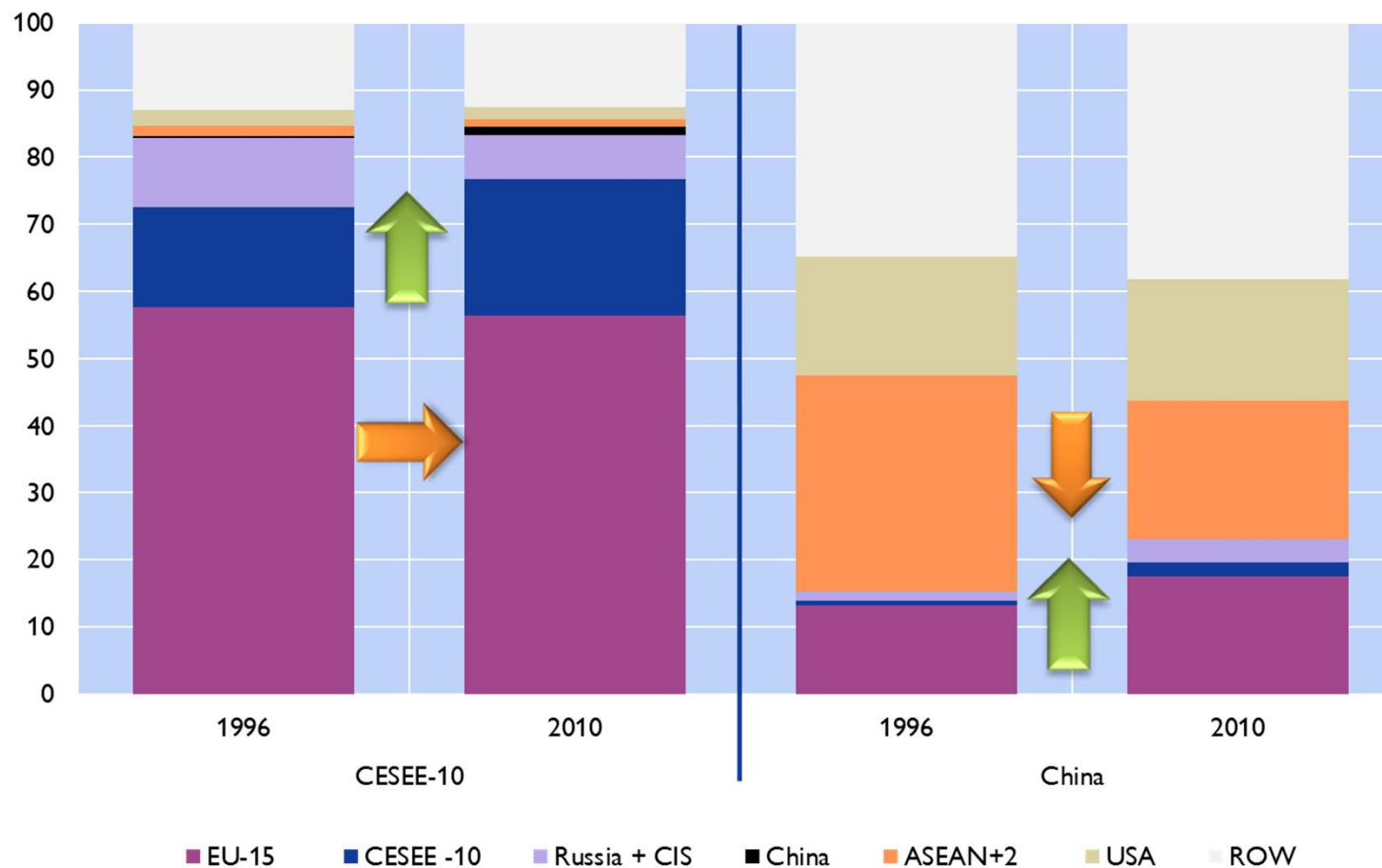
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WIIW | FIW Seminar | December 13, 2012

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Shift in export destinations, China increasingly targets the EU-15

Regional composition of exports to the world in %



Source: COMEXT.

Strong Gains in Market Shares of EU-15 Imports

Share in total EU-15 imports in %

| | CESEE-10 | China |
|-------------|-----------------|--------------|
| 2010 | 7.0 | 7.3 |
| 2005 | 5.1 | 5.0 |
| 2000 | 3.9 | 2.8 |
| 1995 | 3.0 | 1.8 |

Source: COMEXT.

Note: EU-15 imports include intra EU-15 imports..

1 Fishing in the same pool?

➔ Export market shares & revealed comparative advantage

2 Signs for Crowding-out?

➔ Dynamic trade link analysis

3 Exploration versus intensification?

➔ Decomposition of export growth (intensive and extensive margin)

4 Sustainability of the export strategies?

➔ Shift-share analysis of the intensive margin

Comprehensive Data Set

Exporting regions:

- CESEE-10
- China

Export market: EU-15

Time period: 1995-2010

Products: 6-digit HS level

Product classification: BEC

Data source: COMEXT database

Sectoral & regional composition

- of exports
- of the two competitors

for more than

5,300 different products

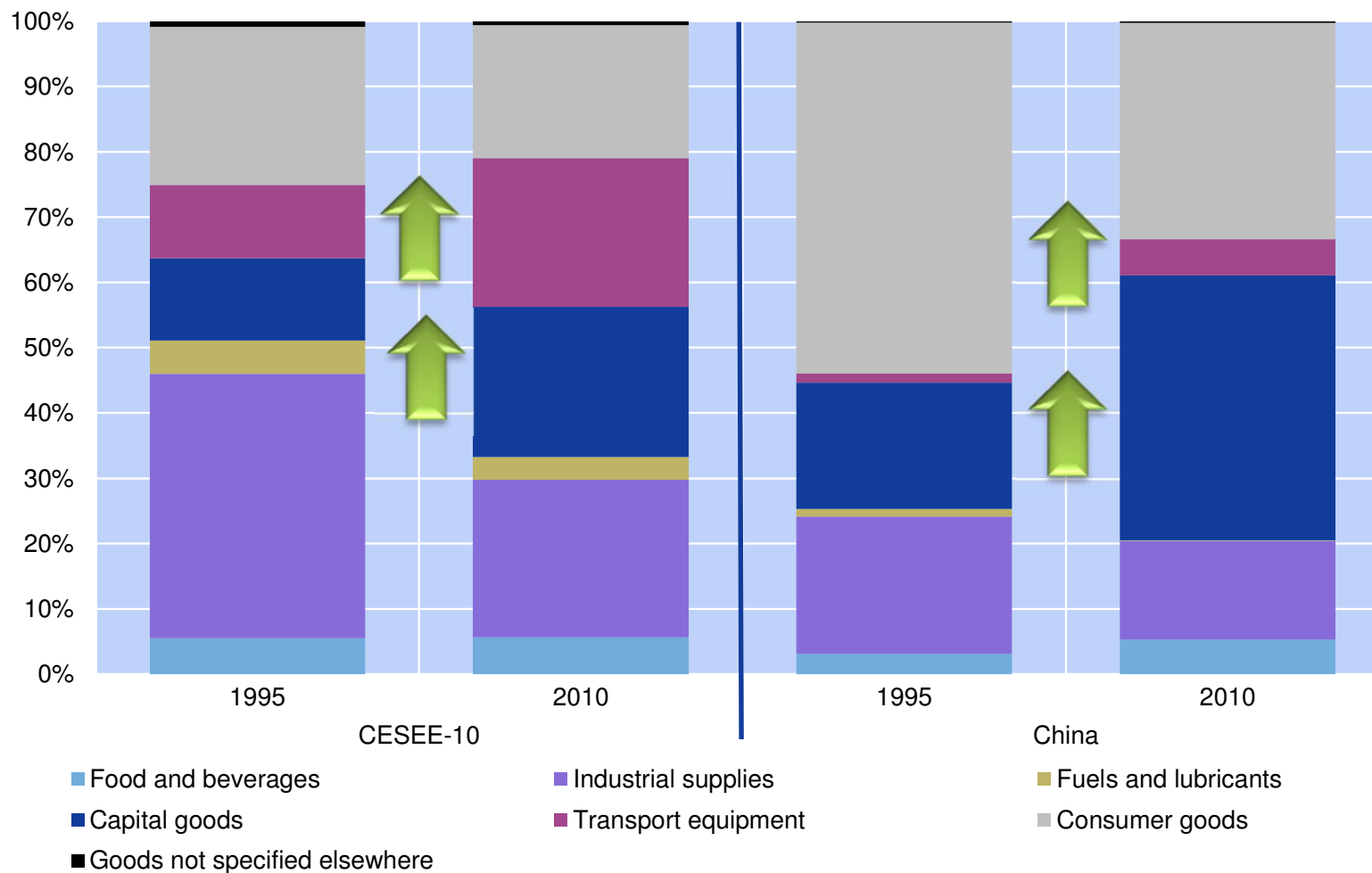
1a Fishing in the Same Pool?

Are CESEE and China gaining market shares in similar product categories?

Yes, to some extent ...

Export Patterns of CESEE and China

Share of product category in total exports to the EU-15



Source: COMEXT.

1b Fishing in the Same Pool?

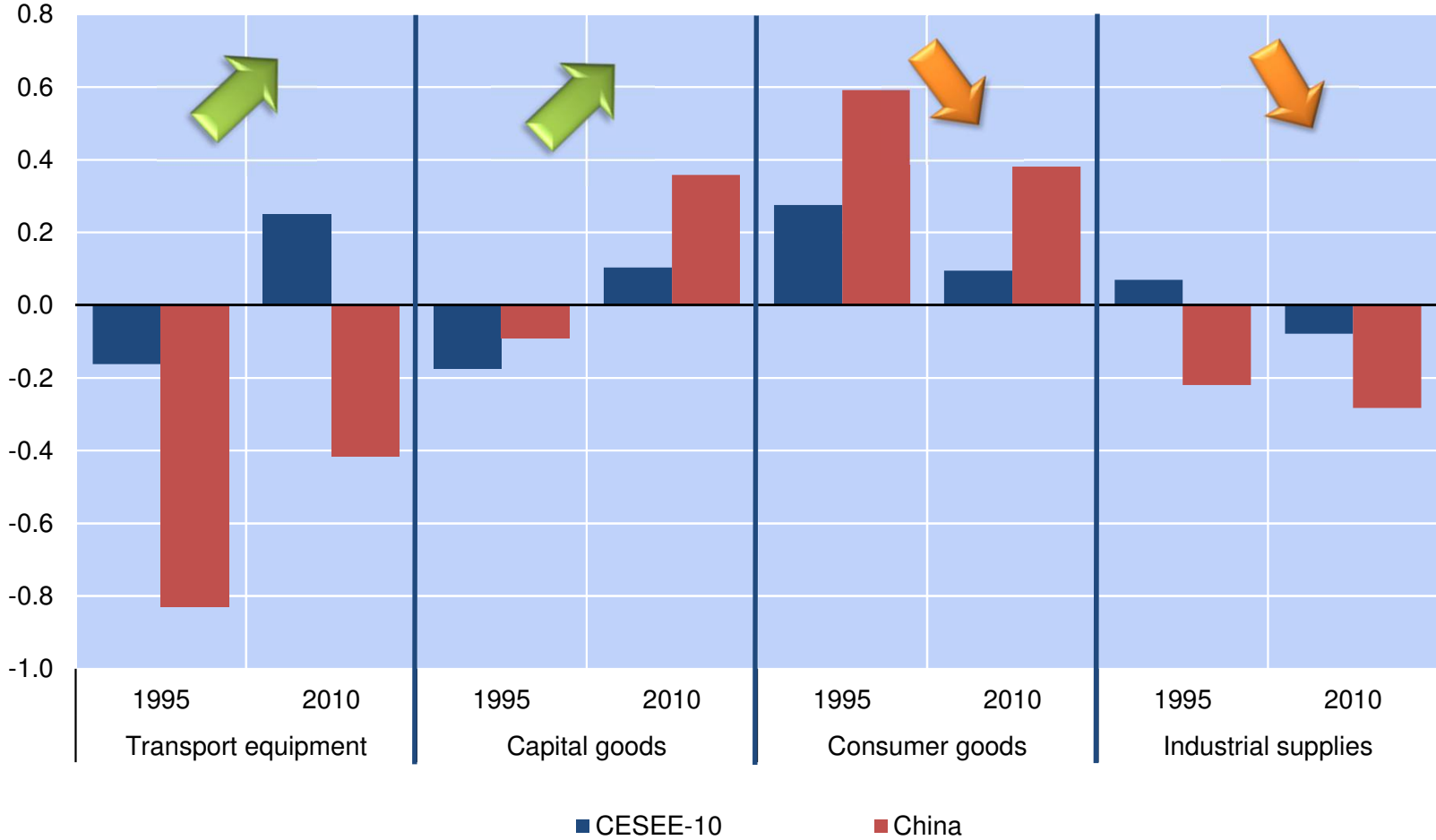
Have CESEE and China developed (revealed) comparative advantages in similar product categories?

Yes, both regions gained (revealed) comparative advantage in the same product groups ...

RSCA Shows a Similar Pattern for CESEE and China

Revealed (Symmetric) Comparative Advantage in selected BEC

Symmetric Balassa Index, %



Source: COMEXT, authors' calculations.

2 Signs of Crowding Out?

Is there evidence that CESEE exports have been crowded out by the entry of Chinese exporters in the EU-15 market?

Not yet, but competition between CESEE and China in the same pool of products and destination markets has intensified ...

Dynamic Trade Link Analysis

- **Number** of trade links (not value)
- **Trade link**: e.g. CESEE-10 exports to AT
- **Survival of trade link** over at least **two years**
- For each exporter we know which product is exported to which destination > **4 Types** of trade links:

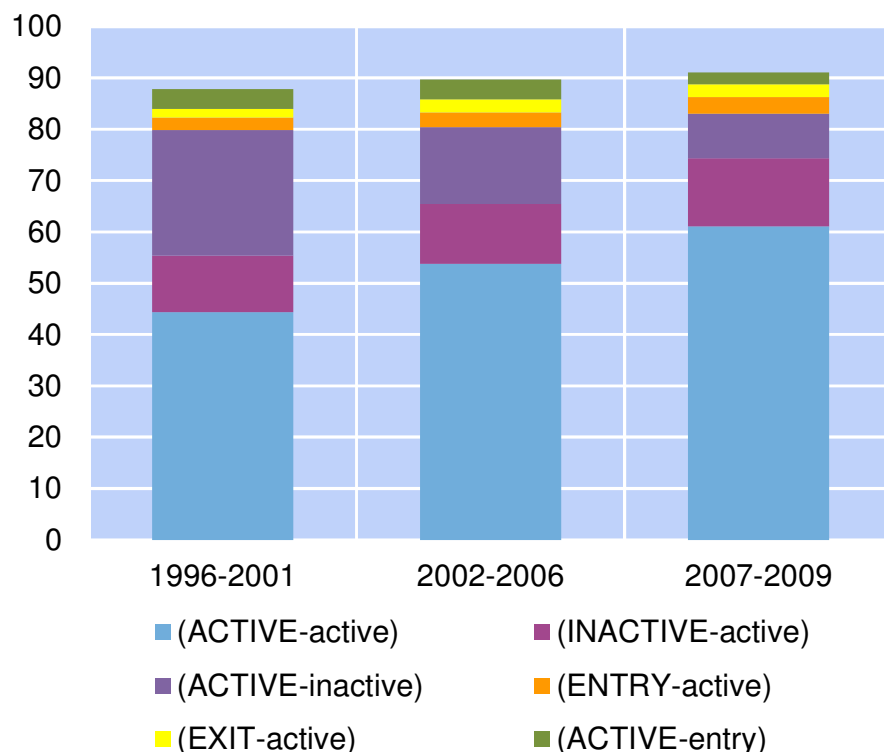
| Year 1 | Year 2 | CESEE-10 |
|--------|--------|----------|
| 1 | 1 | ACTIVE |
| 0 | 0 | INACTIVE |
| 0 | 1 | ENTRY |
| 1 | 0 | EXIT |

- Combination of individual trade links at the product level for **pairs of exporters**: CESEE vs. China
- 2 exporters and 4 types of trade links: $4^2=16$ possible combinations
- At least one of the partners is active in that market

CESEE and China Are Increasingly Competing at the Product Level in the EU-15 Market €NB

Comparison of CESEE's and China's EU-15 trade links

% of all existing trade links



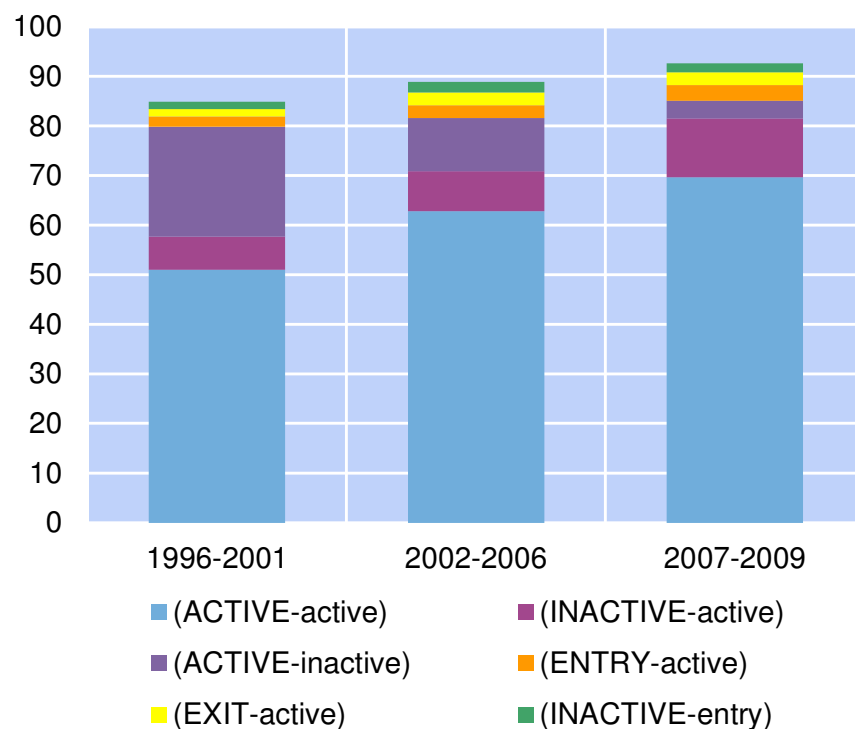
Source: Authors' calculations.

- **Intensified direct competition** between CESEE and China
- **Few areas left** where China could become an additional competitor for CESEE
- **No clear sign of cut-throat competition yet**

CESEE and China Are Increasingly Competing at the Product €NB Level in the EU-15 Market

CESEE's and China's EU-15 trade of capital goods

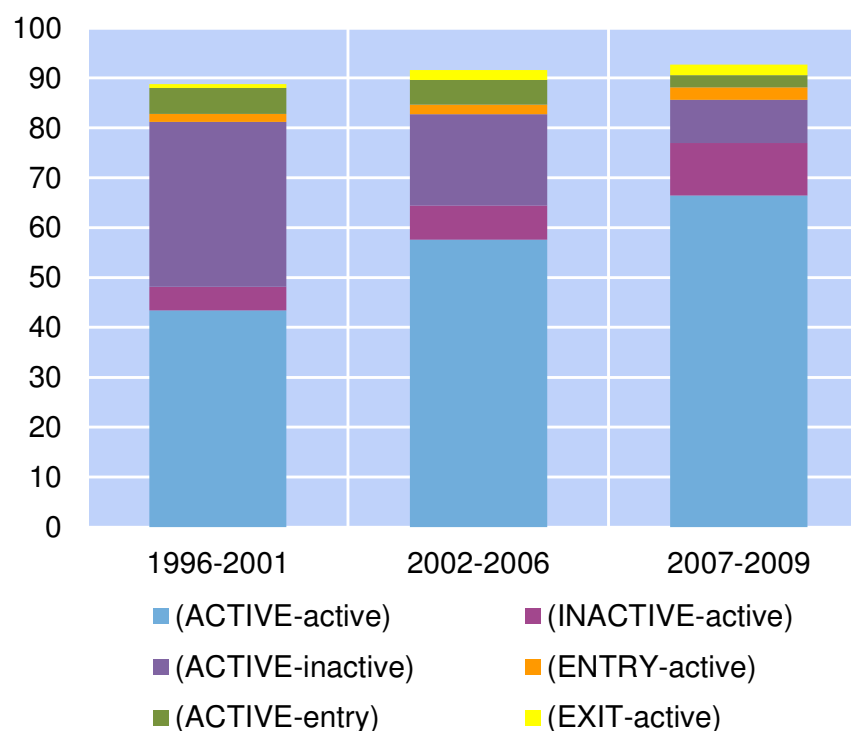
% of all existing trade links



Source: Authors' calculations.

CESEE's and China's EU-15 trade of transport equipment

% of all existing trade links



Source: Authors' calculations.

3 Exploration versus Intensification?

What determines the growth of exports from CESEE and China to the EU-15?

Mainly the intensification of existing trade relationships ...

Decomposition of Export Growth

Intensive margin = value of existing trade / export value growth

Extensive margin = (value of new – lost trade) / export value growth

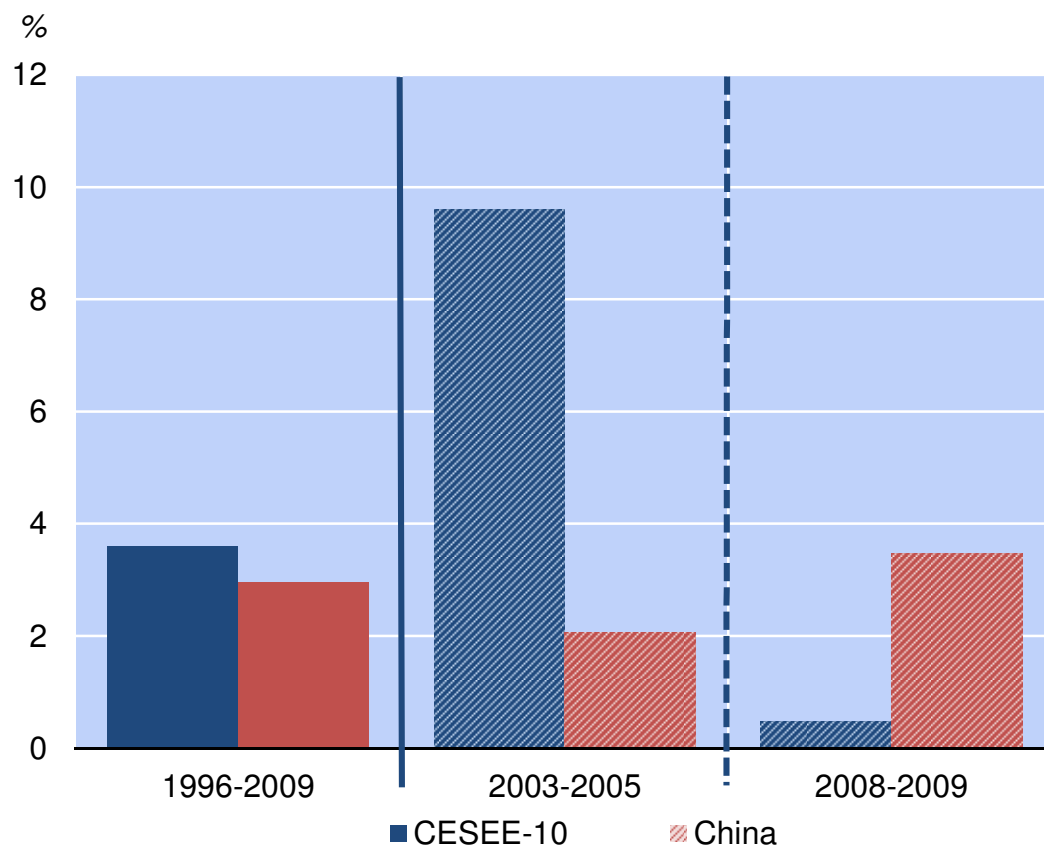
Trade relationship = new product and/or destination

- The results highly depend on the definition:
 - Value/number of trade relationships, new/lost trade links
 - Level of disaggregation
 - Reclassification (1996, 2002, 2007)
 - Comparative/static approach

(Based on Feenstra's (1994) variety index (see Amiti and Freund 2010, Benkovskis 2012); also see Evenett and Venables 2002, Imbs and Warziarg AER, Besedeš and Prusa JDE 2011)

Export Growth Mainly Due to Deepening of Existing Trade

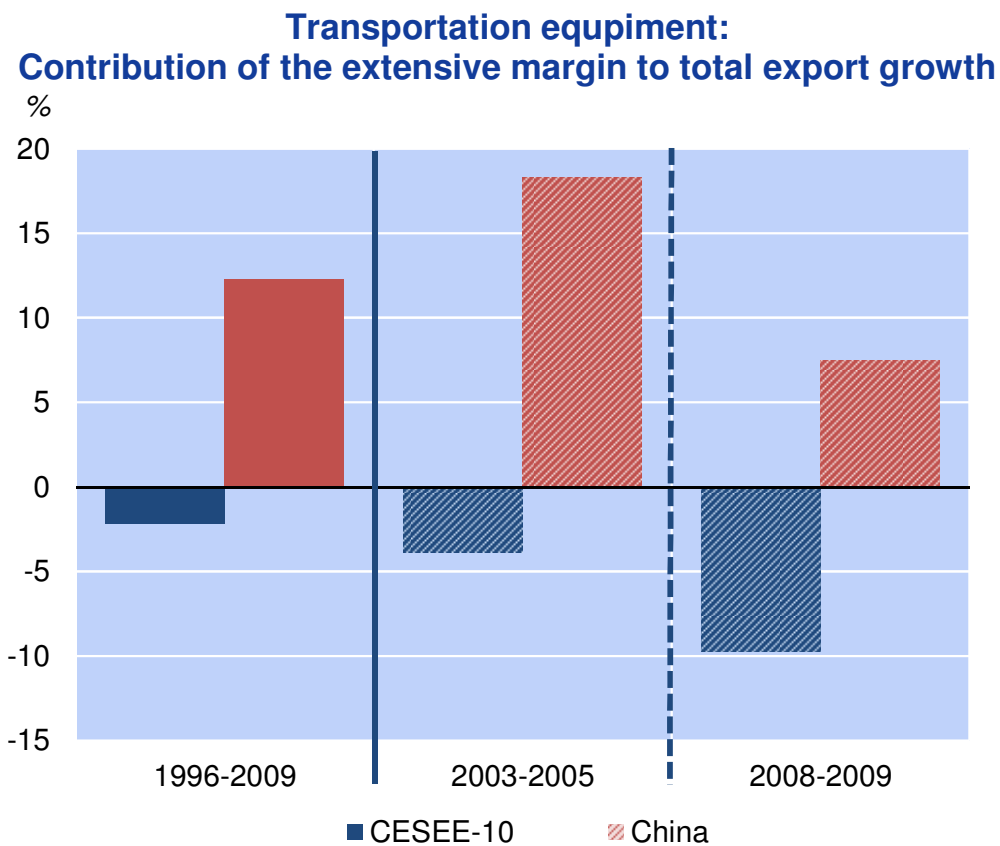
Contribution of the extensive margin to total export growth



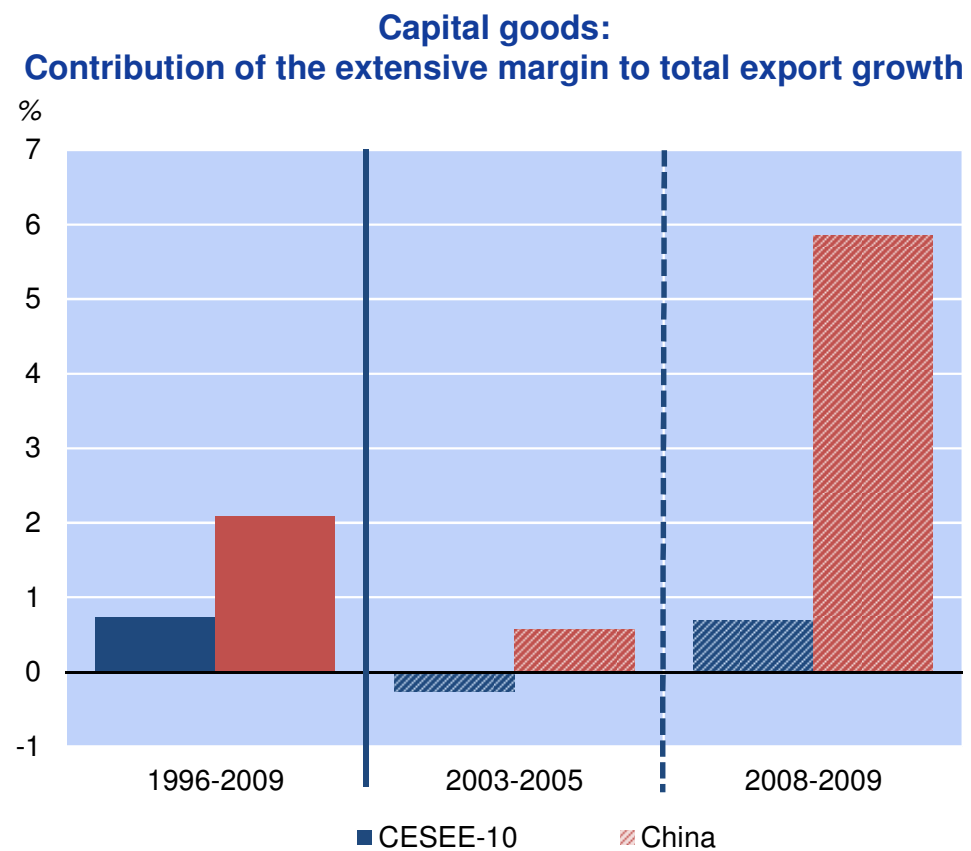
Source: COMEXT, authors' calculations.

- Contribution of new trade links is **small**, also for China
- EU entry greatly **encouraged** CESEE firms to engage in new trade relationships
- **CESEE lost fewer trade relationships** compared to China in the 2009 crisis

Export Growth Mainly Due to Deepening of Existing Trade



Source: COMEXT, authors' calculations.



Source: COMEXT, authors' calculations.

4 Sustainability of the Export Strategies?

Is the intensification of existing trade relationships driven by exporters' competitiveness or by demand-related factors?

Overall, the competitiveness of CESEE and China outweighs beneficial external demand conditions...

Econometric Decomposition of the Intensive Margin

Growth in existing trade relationships is decomposed into:

- average EU-15 import growth ($d\ln X$)
 - geographical effect (GEO)
 - sectoral effect (SEC)
 - **exporter's competitiveness** ($COMP$)
- } **determined by import demand**
- exporter-driven**

based on a weighted regression of year-on-year intensive margin growth at the bilateral product level on importer / product / exporter fixed effects:

$$\ln \frac{X_{ijk}^t}{X_{ijk}^{t-1}} = \text{intercept} + \alpha_i^t + \beta_j^t + \gamma_k^t + \varepsilon_{ijk}^t$$

Aggregate export growth of exporter i:

$$\ln \frac{X_i^t}{X_i^{t-1}} = f \left(\ln \frac{X_{ijk}^t}{X_{ijk}^{t-1}} \right) = \ln \frac{X^t}{X^{t-1}} + \widehat{GEO}_i^t + \widehat{SEC}_i^t + \widehat{COMP}_i^t + \varepsilon_i$$

with f being the sum of export log-growths weighted according to the world market share at the product level (Tornqvist index, see Cheptea, Fontagné and Zignago 2010)

Strong Competitiveness of CESEE and China

Decomposition of the intensive margin, in percent, averages over 1996-2009

| | Intensive margin growth | Average EU-15 import growth | Geographical effect | Sectoral effect | Competitiveness effect |
|----------|--------------------------------|-----------------------------|---------------------|-----------------|------------------------|
| CESEE-10 | 11.6 | 5.6 | -0.1 | -1.0 | 7.2 |
| China | 15.3 | 5.6 | 0.0 | -1.5 | 11.5 |

Source: COMEXT, Authors' calculations.

China Outperforms CESEE in Machinery and Vehicles

Decomposition of the intensive margin, in percent, averages over 1996-2009

| | Intensive margin growth | Average EU-15 import growth | Geographical effect | Sectoral effect | Competitiveness effect |
|---|--------------------------------|-----------------------------|---------------------|-----------------|------------------------|
| Machinery and vehicles | | | | | |
| CESEE-10 | 15.9 | 4.4 | 0.6 | -5.9 | 16.8 |
| China | 22.1 | 4.4 | 0.5 | -5.9 | 24.7 |
| Electrical machinery and precision instruments | | | | | |
| CESEE-10 | 16.3 | 5.6 | 0.7 | 4.8 | 15.7 |
| China | 17.4 | 5.6 | 0.9 | 4.7 | 16.0 |

Source: COMEXT, Authors' calculations.

Conclusions

- Export growth is mainly caused by the **deepening of existing trade links**.
- The strong export performance of CESEE and China is mainly driven by their **competitiveness**.
- CESEE shows a **weaker competitiveness** effect than China **in** one of its main export categories (**transport equipment**) despite its market power in this category.
- CESEE and China are **increasingly competing for the same product categories** in the EU-15 market (transport equipment and capital goods).

Prospects for CESEE

- Competition (especially from China) is intensifying, particularly for transportation equipment and capital goods.
- So far, **China has not been a cut-throat competitor for CESEE** in the EU-15 market.
- Export-led growth strategy has proved successful for CESEE and China in a growing EU-15 market, but competitiveness becomes increasingly crucial in a slow-growth environment.

How sustainable is CESEE's competitive position?

- Not many trade links were lost in the 2009 crisis.
- Specialization on transport equipment has to be reconsidered.



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Thank you for your attention!

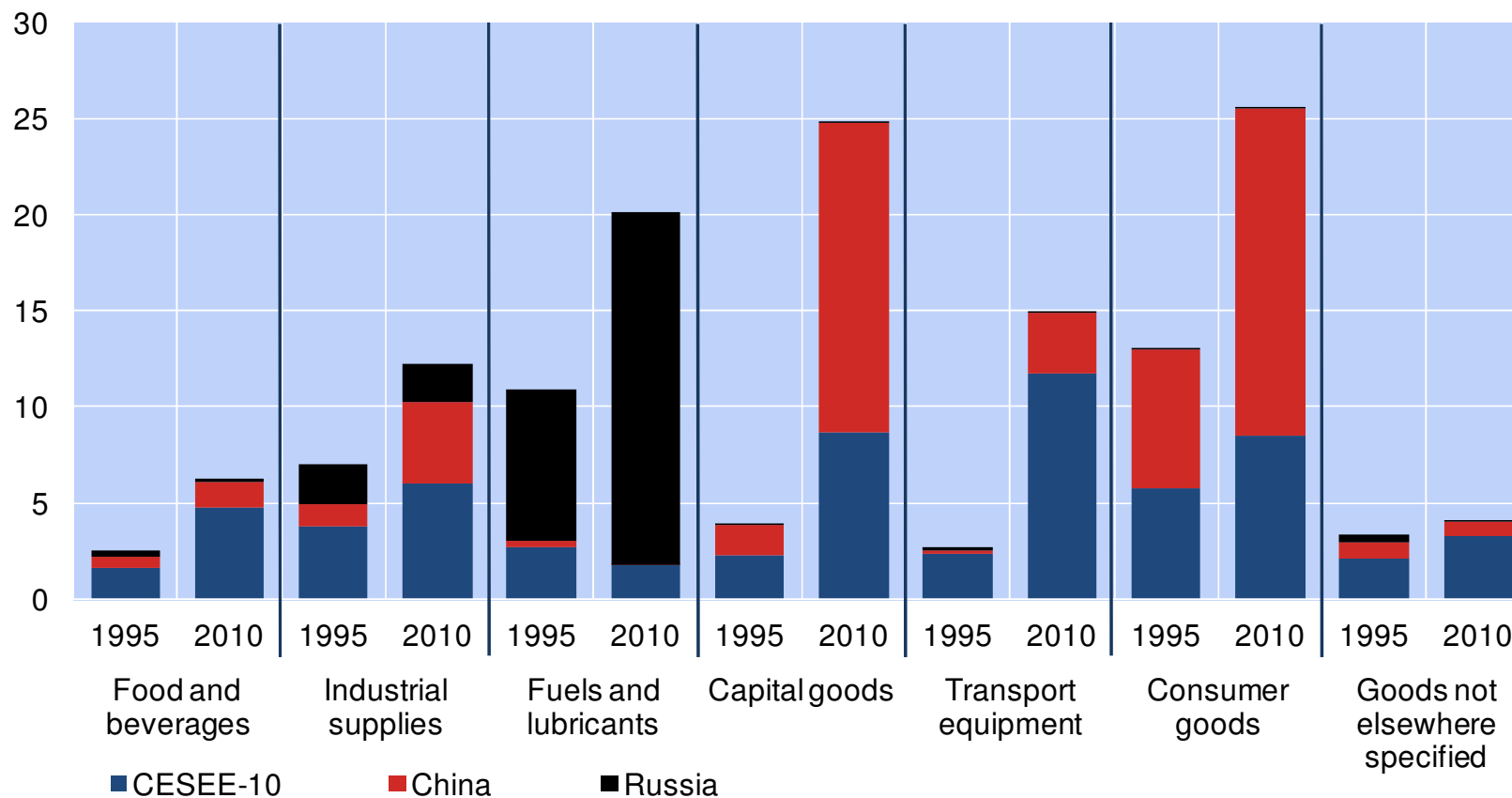
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Export market share: Similar export patterns by end-use categories of CESEE and China – Russia is different

Sector Composition of trade of CESEE, China and Russia with EU-15

Market share of country in total Extra-EU-15 imports according to product category, 1995 and 2010, in



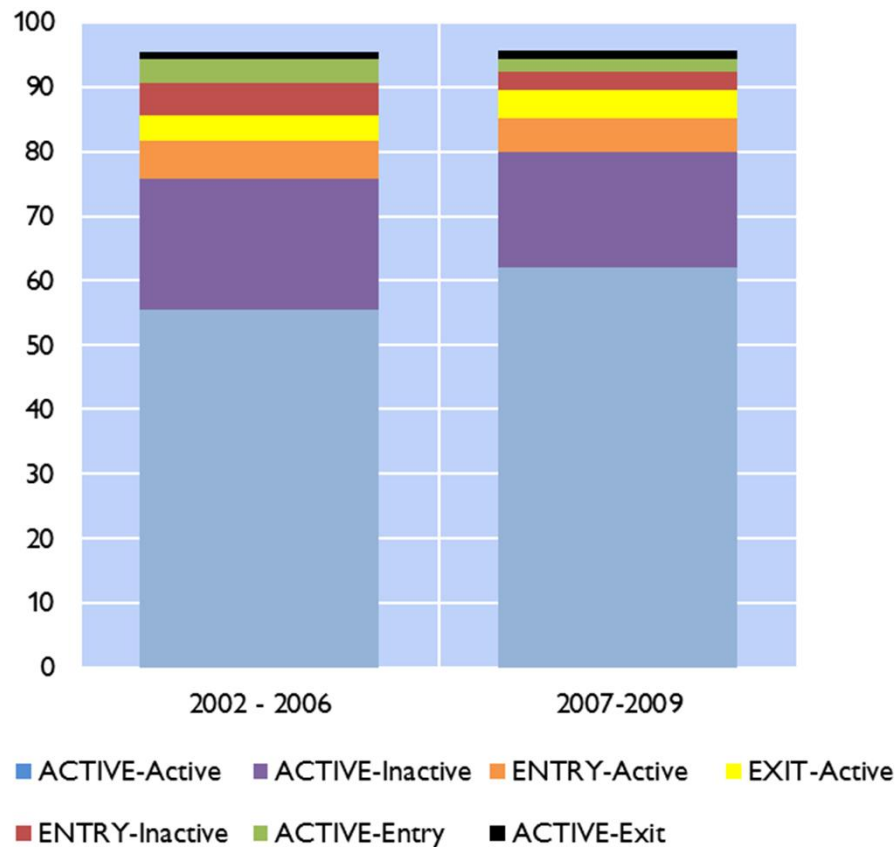
Source: COMEXT.

Note: Total exports to the EU-15 Include intra EU-15 trade.

CESEE and China Are Increasingly Competing at the Product Level in the EU-15 Market

Comparison of CESEE's and China's world trade links

% of all trade links with CESEE having the status ACTIVE, ENTRY or EXIT



Source: Authors' calculations.

- **Intensified direct competition** between CESEE and China
- **Some areas left**, where China could become an additional competitor for CESEE [ACTIVE-Inactive]
- **No clear sign of cut-throat competition** yet, **but** share of [EXIT-Active] trade links is increasing