Stringency and Distribution in the EU Emissions Trading Scheme: First evidence

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Motivation

- ETS is a key instrument in European Climate Policy
- Covers 40% of EU CO_2 emissions and four industrial sectors
- Data on allocation and verified emissions on installation level available for two years
- The analysis covers app. 9.900 installations

Evidence on three issues:

- Stringency of the allocation cap
  - allocation differences among Member States
  - allocation differences among emission intensive sectors

- Distribution of the size of installations with respect to share of emissions

- Spread of long/short positions with respect to size of installation

Method of data analysis (1)

Calculating net positions

1. Long / short position on installation level

   $Allocation_{Installation} – Verified\ Emissions_{Installation}$

2. Gross long / short position aggregated on country / sectoral level

   $\sum Long\ position_{Installation} = Gross\ long\ position_{Sector/Country}$

   $\sum Short\ position_{Installation} = Gross\ short\ position_{Sector/Country}$

3. Net long / short position on country / sectoral level

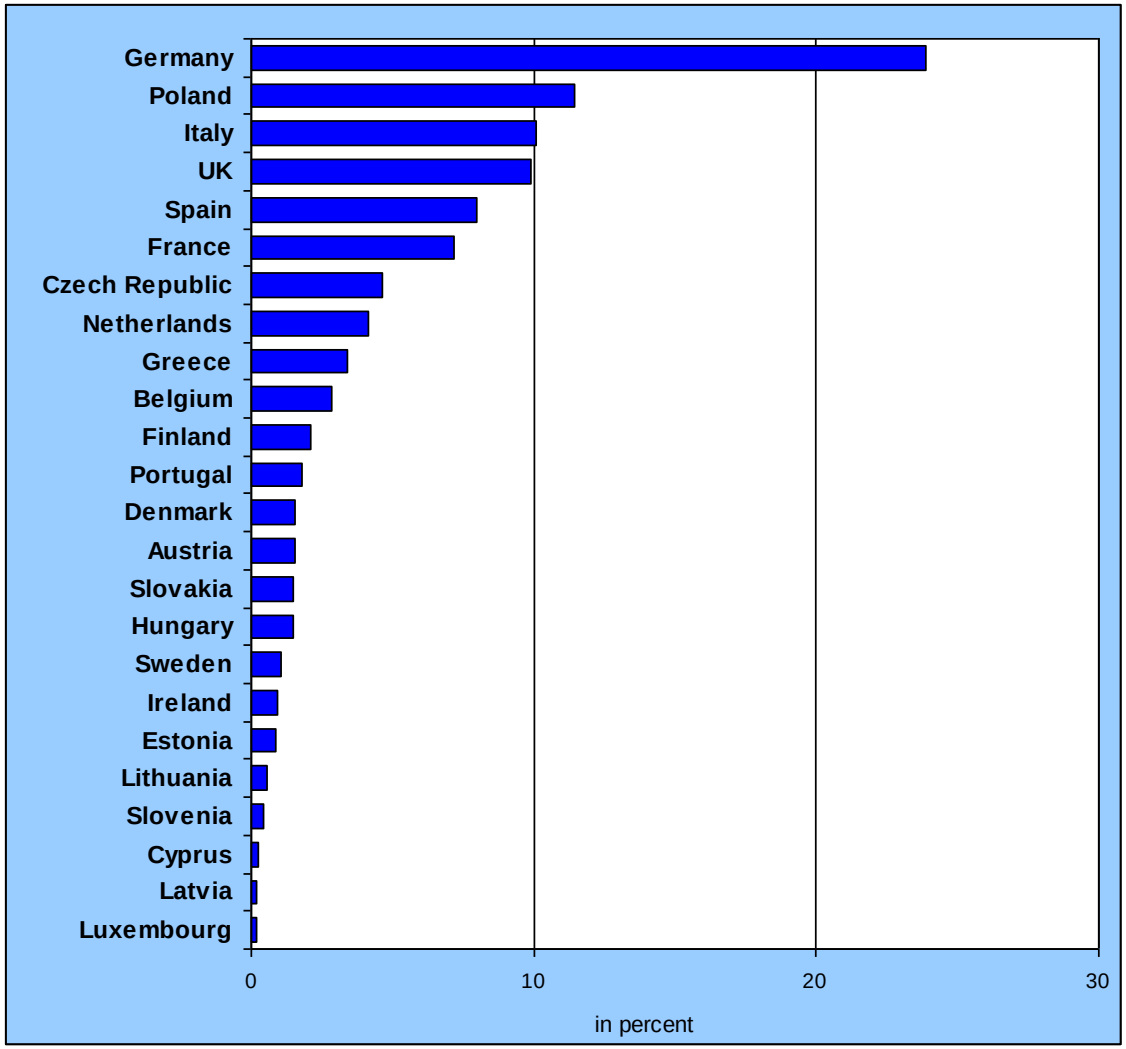
   $\sum Gross\ long\ position_{Sector/Country} - Gross\ short\ position_{Sector/Country}$

   $= Net\ long / short\ position_{Sector/Country}$

Countries‘ share in total EU ETS allowances

Share depends on:

- Industry structure
- Size of the country

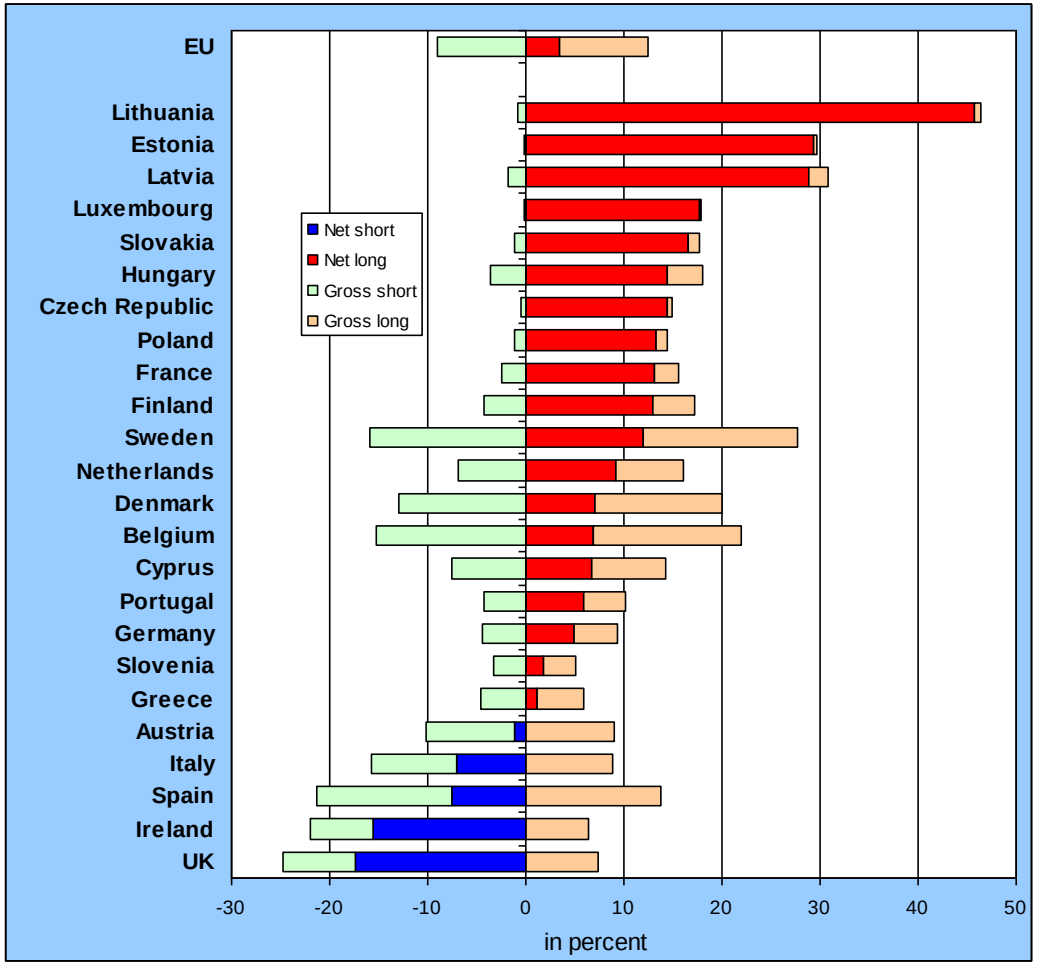


Source: CITL; WIFO calculations

Short and long positions by countries

EU net long position of 3.4%:

Balance of a 12.4% gross long and a 9% gross short position



27 June 2007

Source: CITL; WIFO calculations

IEW 2007, Stanford University

Long and short positions in EU

Net long position

- In most Member States
- In all new Member States

Net short position

- In Austria, Ireland, Italy, Spain, UK

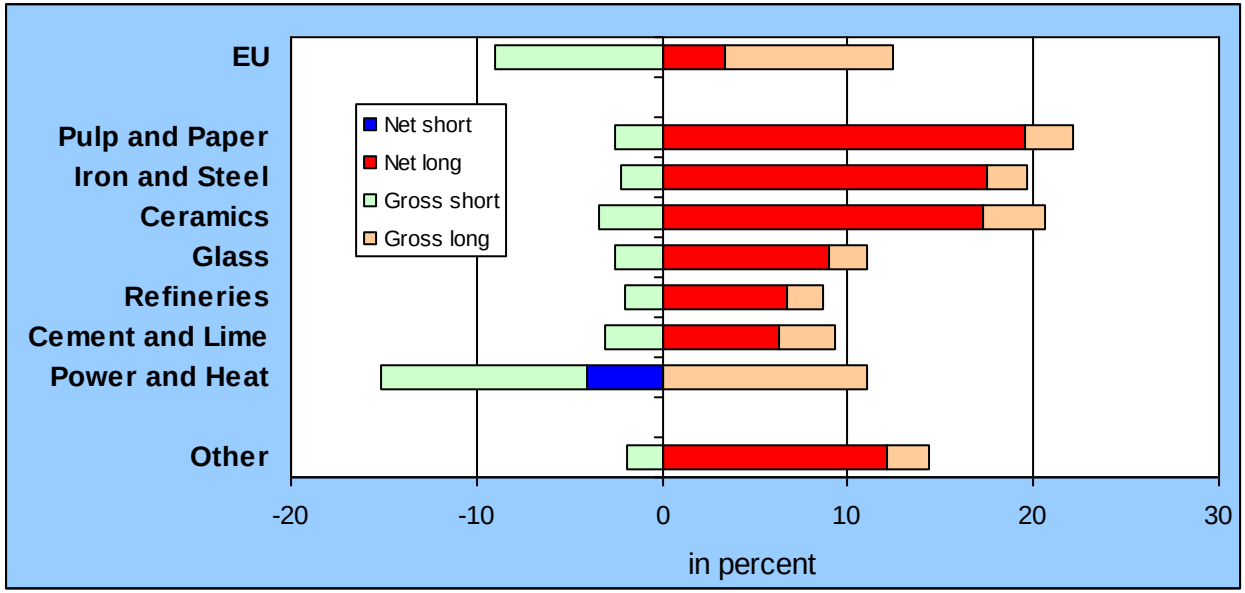
Highest net long position

- In Lithuania (38.8%) and Poland (31 m tons)

Highest short position

- In UK (17.4%) and UK (36 m tons)

Short and long positions by sectors

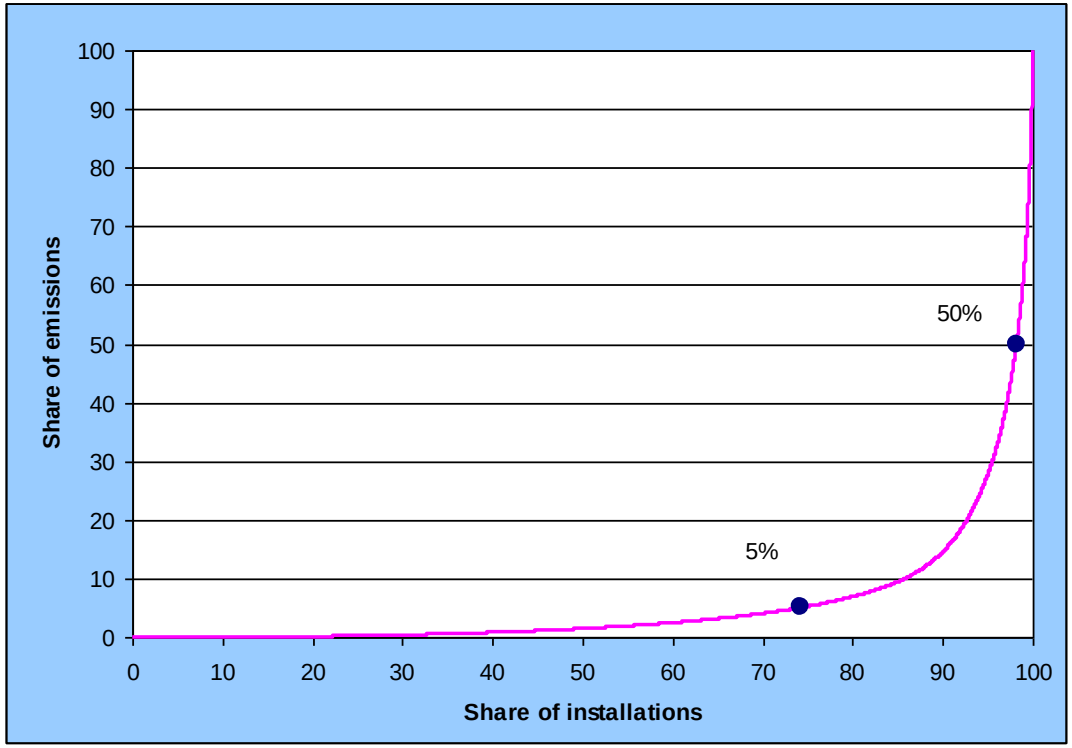


Source: CITL; WIFO calculations

Size of installations

Many small installations with respect to emissions in the EU ETS

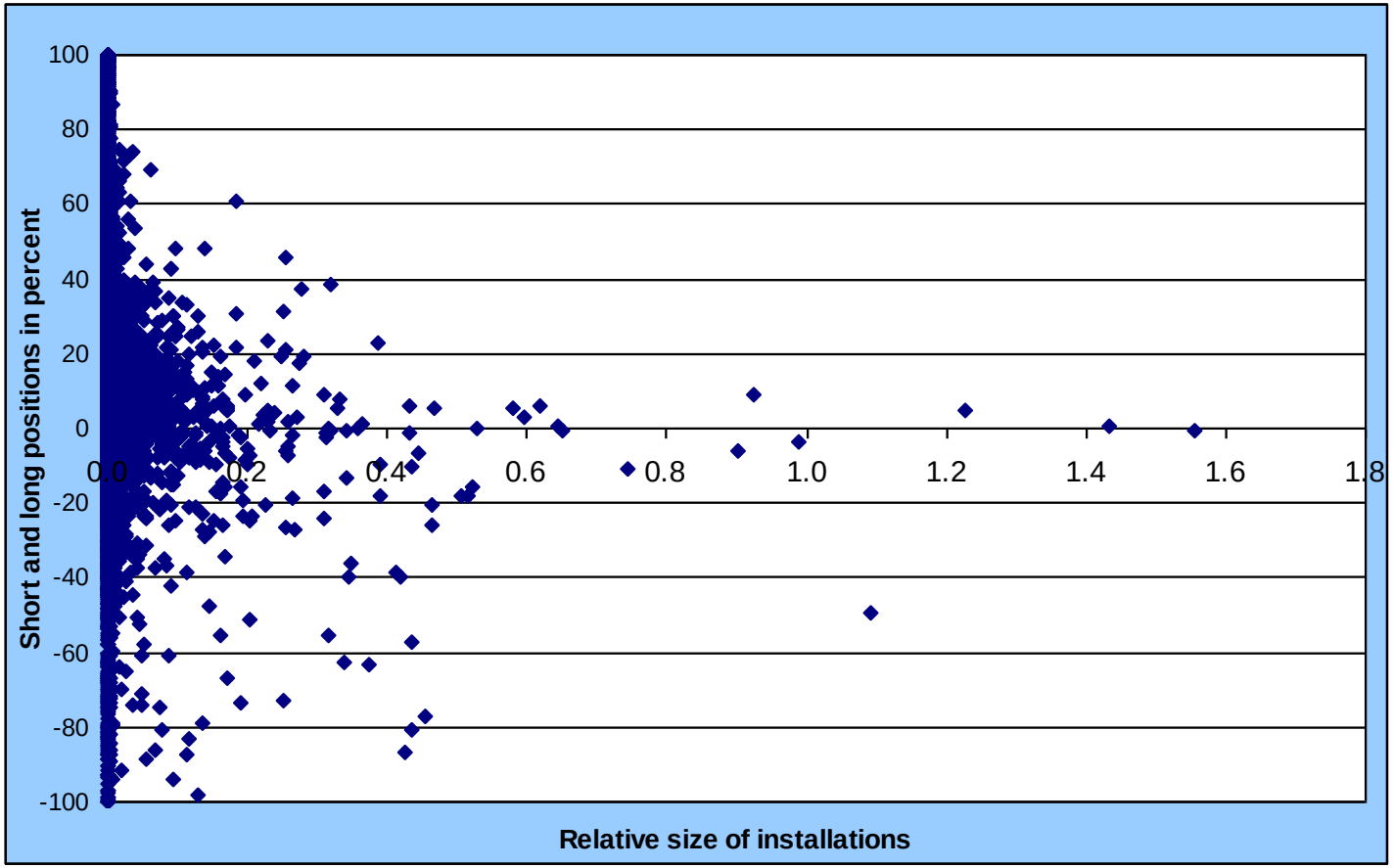
- The smallest 75% of installations account for 5.2% of emissions
- The biggest 1.8% of installations account for 50% of emissions
- The 500 biggest installations account for 72.4% of emissions
- The 1000 biggest installations account for 85.6% of emissions



Source: CITL; WIFO calculations

Allocation discrepancy (1)

Allocation discrepancy and size of installation



Source: CITL; WIFO calculations

Allocation discrepancy(2)

EU	All installations				Accumulated verified emissions: less than 5 %			between 5 % and 50 %			more than 50 %		
	Number of installations	Net position in tons	Net position in %**	Normalized mean abs. dev. in %***	Number of installations	Net position in %**	Normalized mean abs. dev. in %***	Number of installations	Net position in %**	Normalized mean abs. dev. in %***	Number of installations	Net position in %**	Normalized mean abs. dev. in %***
Total*	**9,934**	**71,235,647**	**3.4**	**14**	**7,370**	**33.5**	**47**	**2,385**	**7.7**	**20**	**179**	**-5.8**	**18**
Power and Heat	2,920	-52,759,498	-5.1	29	2,404	35.4	56	445	-1.4	25	71	-16.0	19
Other	6,012	86,998,133	11.6	20	3,608	30.1	42	2,254	11.1	18	150	9.6	14

*** Since a distinction between power and heat and other sectors is not possible for all countries, total figures do not equal the sum of the sectoral breakdown**

**** Net position in percent of allocated allowances.**

***** Mean absolute deviation of allocation discrepancies normalized by the mean size of installations**

Source: CITL; WIFO calculations

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Caveats

- Final conclusions about long /short positions possible in 2008
- Possible other reasons for short / long positions than generous or stringent allocation
- Thorough analysis on competitiveness effects necessary
- Vague evidence on abatement activities

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Conclusions

- Large differences in long / short positions within and between sectors and between Member States
- On EU level „power and heat“ is the only sector exhibiting a net short position
- Large number of small installations account for small share of emissions
- Spread of allocation discrepancies varies according to size of installations and sectors

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Thank you for your attention!

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