

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

**Claudia Kettner
Angela Köppl
Stefan P. Schleicher
Gregor Thenius**

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- ETS is a key instrument in European Climate Policy
- Covers 40% of EU CO₂ 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

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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

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Calculating net positions

1. Long / short position on installation level

$$\text{Allocation}_{\text{Installation}} - \text{Verified Emissions}_{\text{Installation}}$$

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

$$\sum \text{Long position}_{\text{Installation}} = \text{Gross long position}_{\text{Sector/Country}}$$

$$\sum \text{Short position}_{\text{Installation}} = \text{Gross short position}_{\text{Sector/Country}}$$

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

$$\sum \text{Gross long position}_{\text{Sector/Country}} - \text{Gross short position}_{\text{Sector/Country}}$$

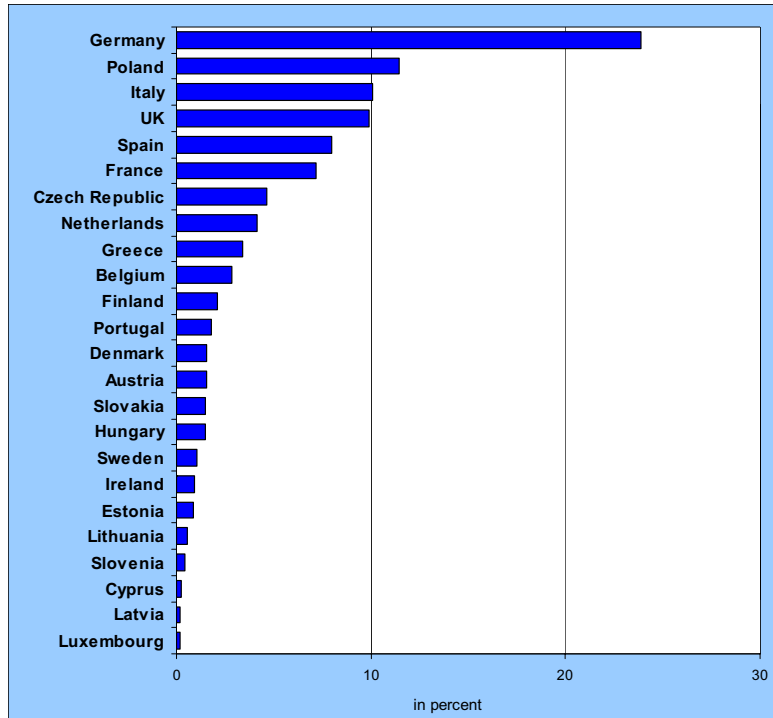
$$= \text{Net long / short position}_{\text{Sector/Country}}$$

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Share depends on:

- Industry structure
- Size of the country



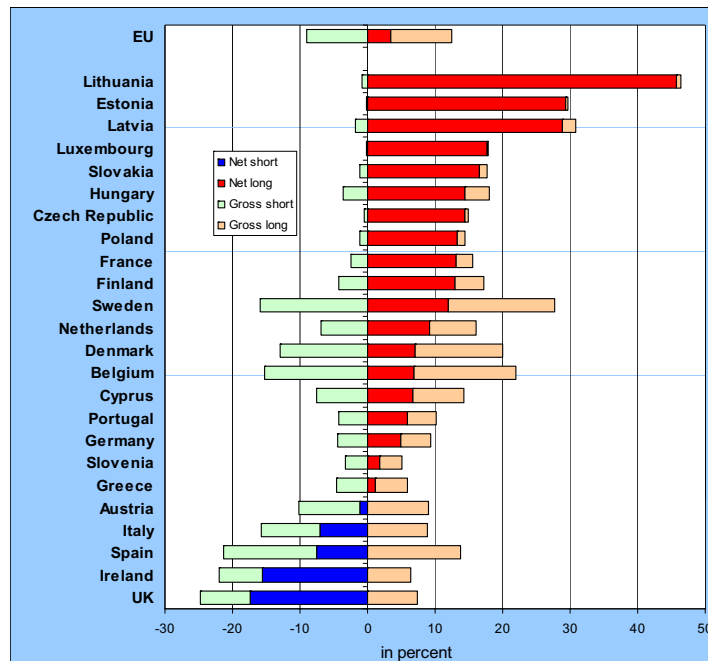
Source: CITL; WIFO calculations

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EU net long position of 3.4%:

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



Source: CITL; WIFO calculations

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Net long position

- In most Member States
- In all new Member States

Net short position

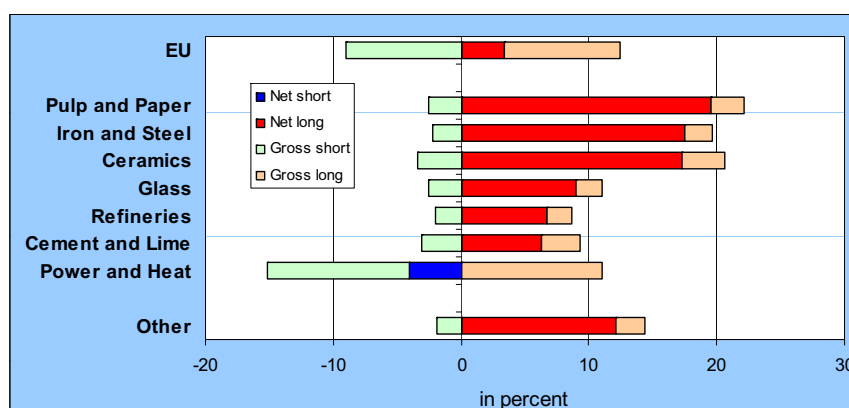
- In Austria, Ireland, Italy, Spain, UK

Highest net long position

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

Highest short position

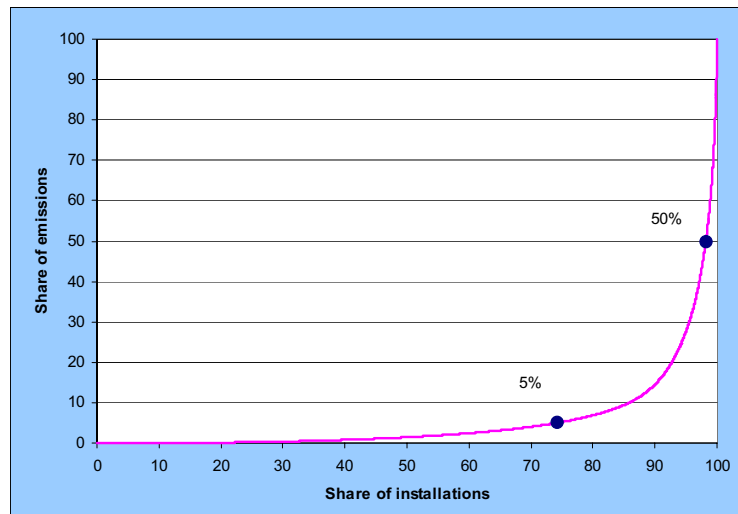
- In UK (17.4%) and UK (36 m tons)



Source: CITL; WIFO calculations

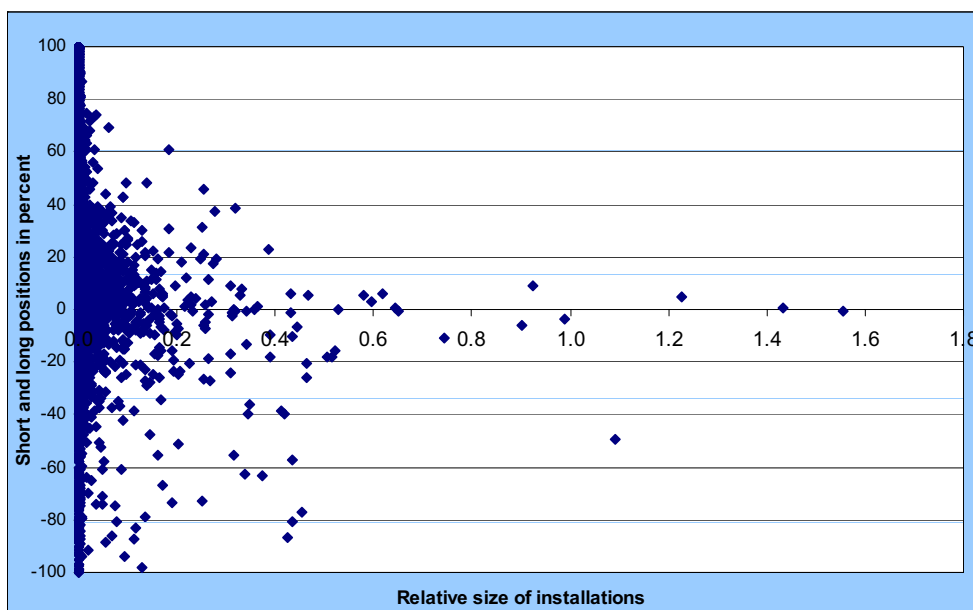
Many small installations with respect to emissions in the EU ETS

- 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 and size of installation



Source: CITL; WIFO calculations

| EU | All installations | | | | Accumulated verified emissions | | | | | | | | |
|----------------|-------------------------|-------------------|------------|---------------------------|--------------------------------|--------------|---------------------------|-------------------------|--------------|---------------------------|-------------------------|--------------|---------------------------|
| | | | | | less than 5 % | | | between 5 % and 50 % | | | more than 50 % | | |
| | Number of installations | Net position | | Normalized mean abs. dev. | Number of installations | Net position | Normalized mean abs. dev. | Number of installations | Net position | Normalized mean abs. dev. | Number of installations | Net position | Normalized mean abs. dev. |
| | in tons | in %** | in %*** | in %** | in %** | in %*** | in %** | in %** | in %*** | in %** | in %** | in %** | 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

- 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

- 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!

Claudia.Kettner@wifo.at

Angela.Koeppel@wifo.at

Stefan.Schleicher@wifo.at

Gregor.Thenius@wifo.at

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