



THE CLIMATE IMPLICATIONS OF GOVERNMENT SUPPORT IN ALUMINIUM SMELTING AND STEELMAKING

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What is the problem?

- Government support can have multiple implications for trade:
 - Competition distortion: allowing less innovative, efficient or competitive companies to crowd out other firms ((OECD, 2017); (Evenett and Fritz, 2021)).
 - Investment decisions: links between government support and larger investments in fixed tangible assets (OECD, 2021).
 - Trust undermining: lower trust in the global trading system and fuel anti-globalization sentiment (OECD, 2017).



What is the problem?

- May also contribute to increase emissions, especially in energy-intensive sectors:
 - Excess production: (inefficient) firms producing industrial output above market levels thereby generating excessive emissions.
 - Incentives removal: less incentives to adopt more environmentally friendly production methods (soft budget constraint phenomenon).



What does the OECD do?

Explore empirically whether government support has contributed to increase emissions of GHGs in industrial sectors

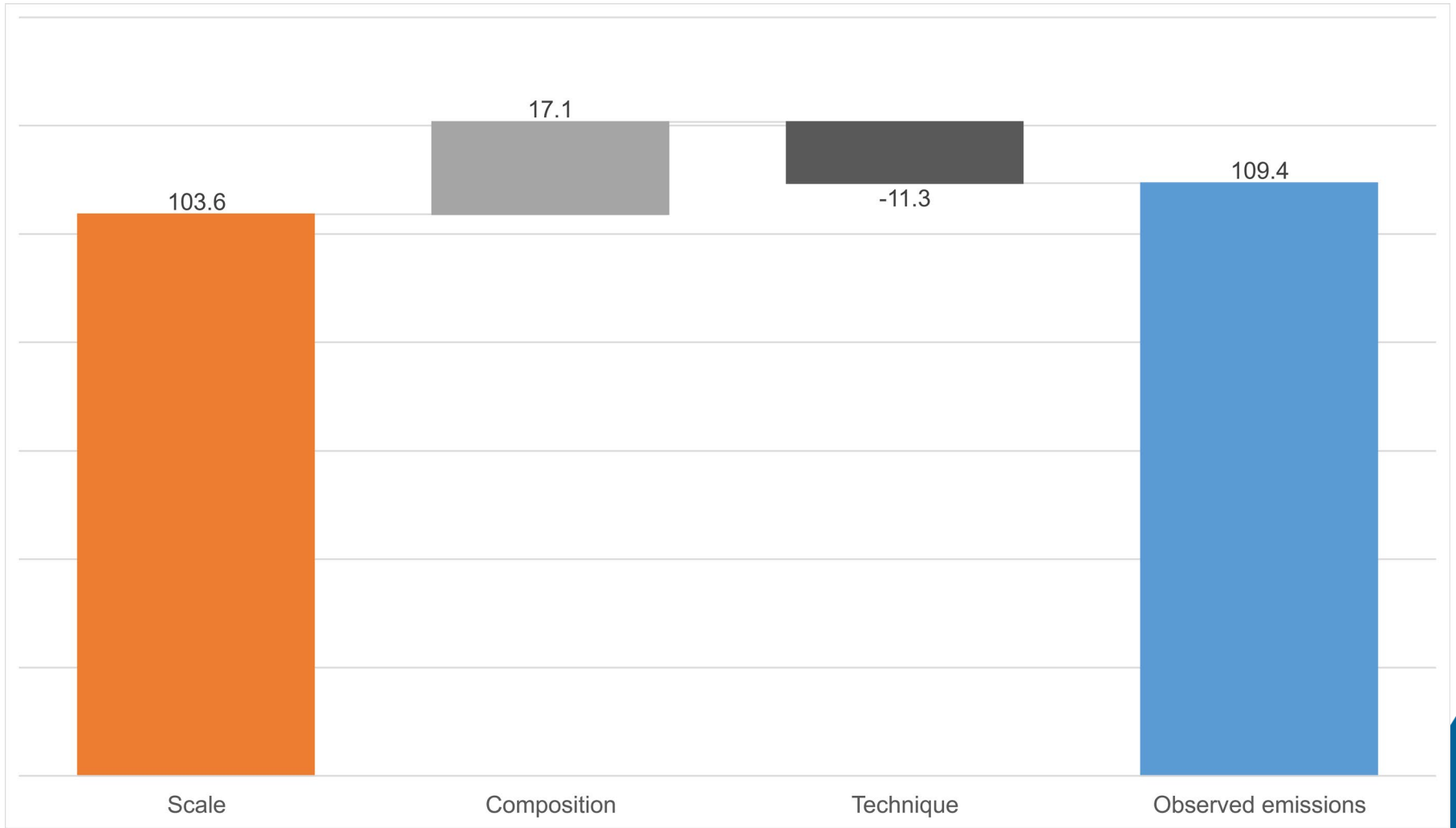
- Focus on aluminium smelting and steelmaking because:
 - they are energy intensive (respectively 2% and 10% of global carbon emissions);
 - they receive large amounts of government support (OECD, 2021).



MAIN FINDINGS

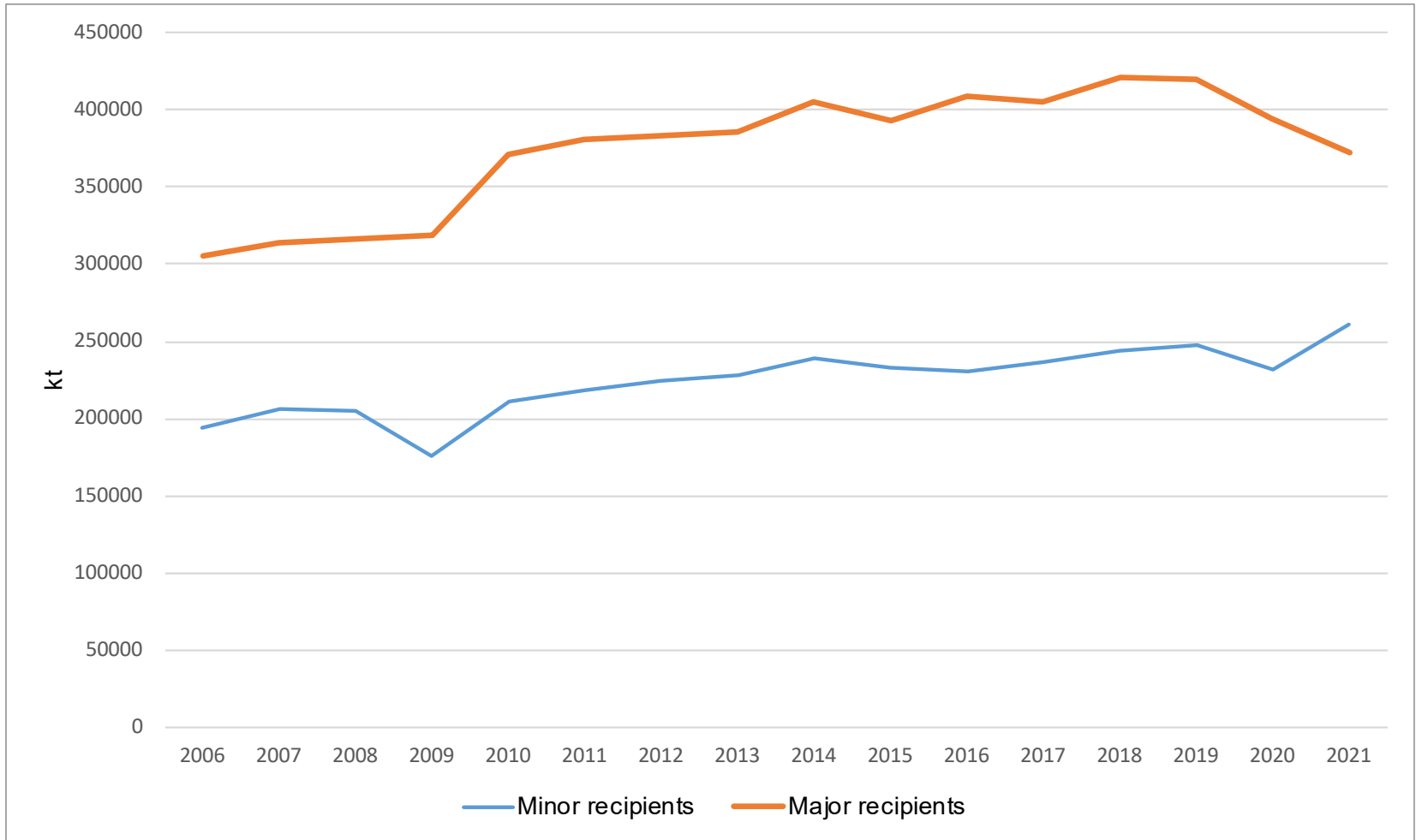


Decomposing emissions in steelmaking





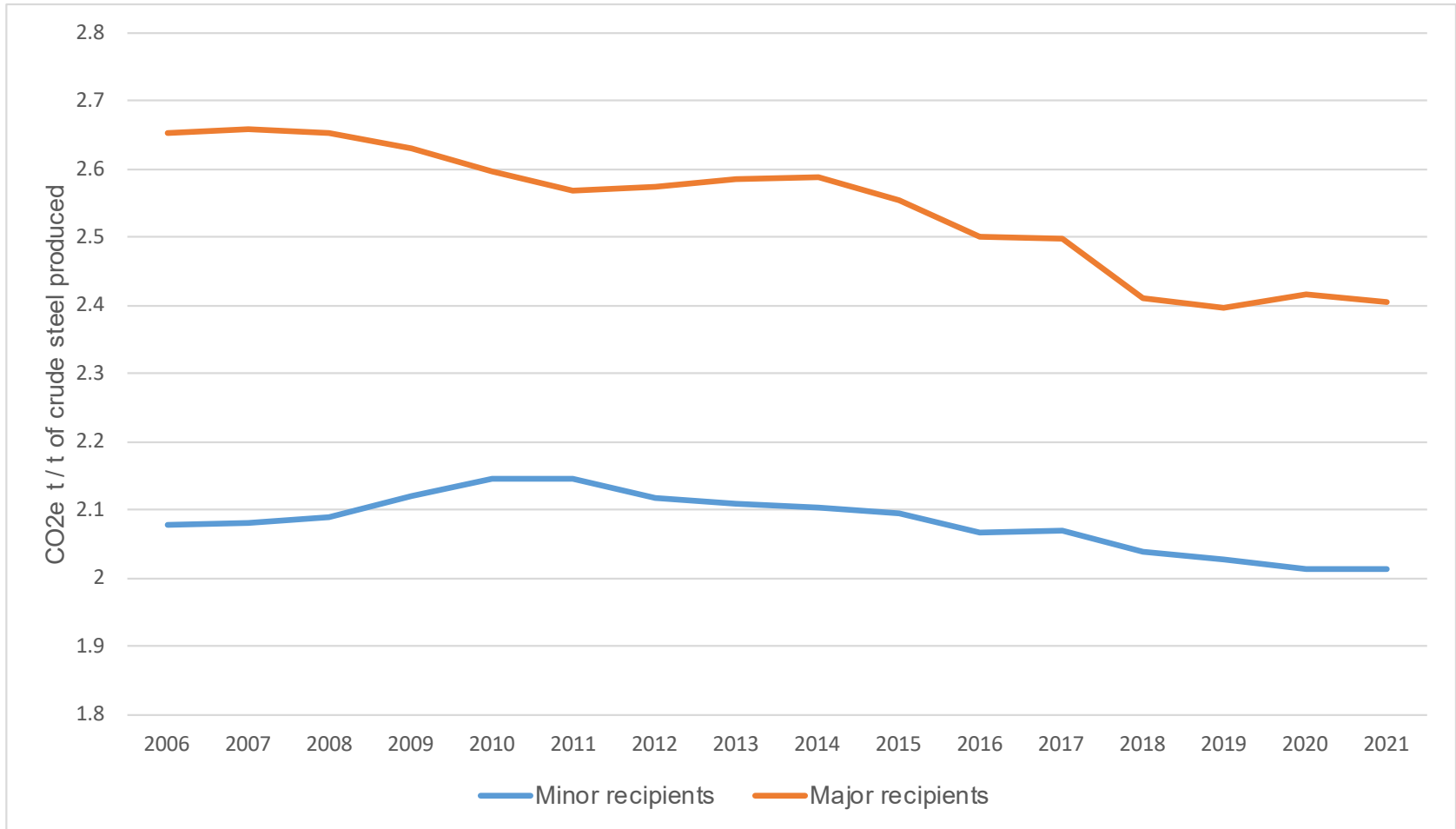
Government support helps drive production, which drives emissions



Production of steel firms (major vs minor recipients of government support)



Government support does not drive the technique effect which reduces total emissions



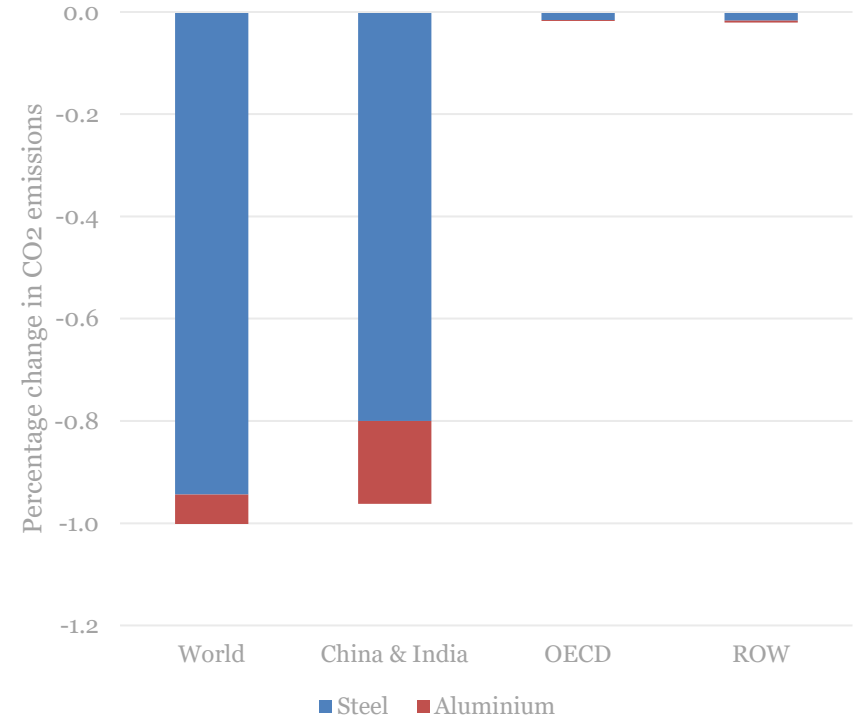
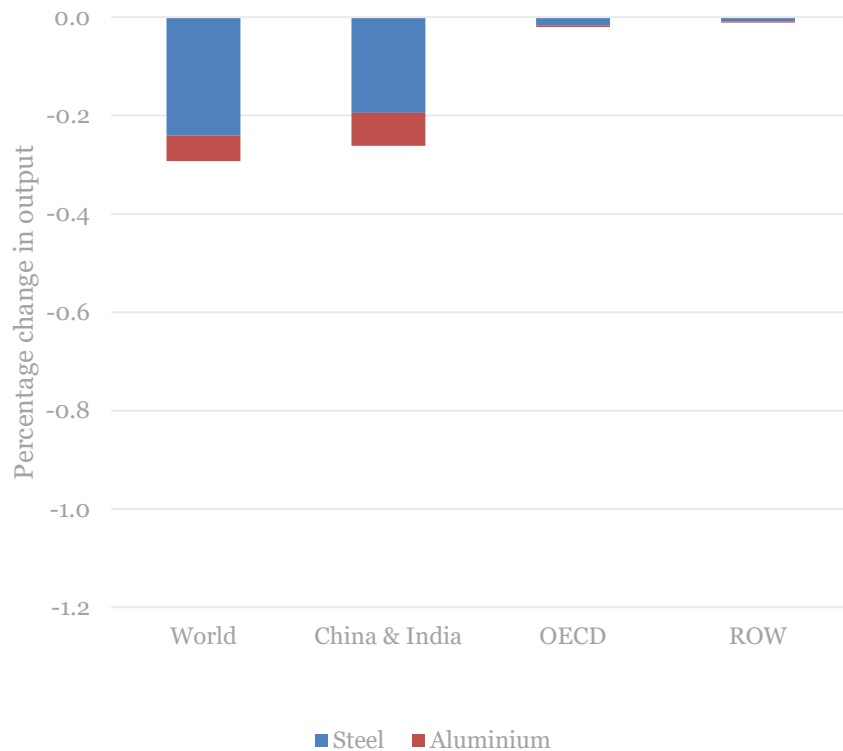
Emission intensities of steel mills (major vs minor recipients of government support)



WHAT IF GOVERNMENT SUPPORT IS
REMOVED?



Simulations: what if we remove all government support?



Percent change in Co2 emissions and output decomposed by region



CONCLUDING REMARKS



Summing up

Government support...

- ... contributes to increased emissions from aluminium and steelmaking activities:
 - mainly through an increase in production output
 - but also by moving production from more to less efficient plants
- ... does not play a role in the development of techniques enabling enhanced environmental performance.
- If government support is removed, global output will decrease but emissions will decrease much more.



THANKS