### the role of China, dumped steel & tariffs

China has laxer green taxes, lower VAT (haven't researched other taxes yet) and cheaper labour, so compliance costs are lower. (China has VAT of 17%; UK has VAT of 20%.) All of these factors reduce the cost of production.

https://www.gov.uk/green-taxes-and-reliefs/overview https://en.wikipedia.org/wiki/Value-added tax#China

https://www.gov.uk/vat-rates

https://en.wikipedia.org/wiki/List of minimum wages by country

The current slowdown has severely hit the demand for steel, leaving China with a surplus of steel. The production of steel in China is unlikely to stop, because local governments support the steel industry.

http://www.bbc.co.uk/news/business-36099043

http://www.nytimes.com/2012/05/04/business/global/in-chinas-floundering-steel-sector-the-burden-of-politics.html

China has dumped this steel / sold this steel below the cost of production, selling the steel at a loss, making the price of Chinese steel ridiculously cheap when in conjunction with low tariffs. The EU has a tariff of 16% on cold-rolled steel; steel used to manufacture cars and appliances, and is used in construction. In contrast the US has raised the tariff of 266% to 522% on cold-rolled steel. David Cameron's government objected to proposals to reform the lesser duty rule, and a reform would have allowed higher tariffs to be placed on Chinese dumped steel. Tariffs on steel are between 9% and 16%.

https://www.theguardian.com/business/2016/may/18/uk-and-eu-urged-to-act-on-chinese-steel-dumping-after-us-hikes-duty-on-imports

https://fullfact.org/europe/is-uk-calling-for-lower-eu-duties-chinese-steel/

(http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?

uri=CELEX:32016R0113&from=EN#page=22

http://europa.eu/rapid/press-release IP-16-287 en.htm)

## regarding the environment & price discrimination

Tim Morris **Head of Public Affairs for Tata Steel in Europe** thinks people value the environment, and because of this the company can take part in price discrimination to a greater degree than steel exporters in China. He believed Tata Steel in Europe would never win on the price of steel alone, presumably because of the low cost of production of steel in China, the dumped steel & the low tariffs.

http://www.cisl.cam.ac.uk/publications/publication-pdfs/10-years-carbon-pricing-europe.pdf

\*Carbon emissions play a massive role; the reason will be brought up later.

### the role of ownership structure in reducing carbon emissions

What is private equity? #eli5

https://www.reddit.com/r/explainlikeimfive/comments/16pd2p/eli5\_what\_is\_private\_equity\_and\_how\_is\_it/

tl;dr: most successful strategies at reducing carbon require longer payback periods Tata and JLR (owned by Tata Motors, owned by Tata group)(amongst other companies) had issue with ownership structure, presumably private equity. Therefore daily "bottom line" is more important, so foreplanning to reduce carbon is more difficult; profits & returns are on a short-term basis.

# the role of senior management in reducing carbon emissions

The vision & engagement of senior management typically the CEO are vital for agendas regarding emissions reduction. This doesn't seem to be an issue for Tata because Jonathan Garett **Director**, **CSR** - **Jaguar Land Rover** (owned by Tata Group) described a long-term view in the group that resource scarcity and carbon dioxide will get more important.

http://www.cisl.cam.ac.uk/publications/publication-pdfs/10-years-carbon-pricing-europe.pdf

### The EU Emissions Trading Scheme & the aspect of free allowances

The EU ETS gives allowances; 100% of allowances are given for free to sectors / subsectors **prone to carbon leakage** up to the particular benchmarks for those particular sectors / sub-sectors. Benchmarks are set to the most efficient installations in those particular sectors / sub-sectors. The free allocation of other sectors is reduced yearly across phase 3, from 80% in 2013 to 30% in 2020. Governments typically allocate more free permits than necessary because free permits cost nothing and free permits can only boost domestic firms.

Tata Steel in Europe is in a sector prone to carbon leakage and is allocated 100% of allowances to the benchmark for the that sector, and it had profited £704 million by selling off spare allowances allocated to them. Though the amount of spare allowances can be offset by for example the plant in Port Talbot being under-allocated. They say they have increasingly efficient production techniques which resulted in the massive surplus.

Tata Steel in Europe then get enough free allowances to cover all the costs related to carbon emissions. Therefore the price of [additional] auctioned allowances isn't **directly** relevant (still affects the power sector.) Tata Steel in Europe and similar companies presumably set the benchmarks, and even then end up with surpluses of allowances which can be sold (unless the allowances are mis-allocated.)

http://ec.europa.eu/clima/policies/ets/allowances/leakage/index\_en.htm http://www.bbc.co.uk/news/science-environment-35994279

EU ETS increases energy prices, and the UK government compensates sectors for the increases in energy prices because of the EU ETS. There is cause for concern that in future phases the EU ETS won't allow the UK government to compensate sectors to a sufficient degree which are significantly prone to carbon leakage. **This creates long-term uncertainty.** 

https://www.theguardian.com/environment/2016/apr/05/green-policies-are-not-responsible-for-the-tata-steel-crisis

https://www.gov.uk/guidance/participating-in-the-eu-ets

The UK had the highest industrial energy prices for extra large consumers in the EU. This is because the energy industry is given no free allowances / all of them are bought (from auctioned allowances) in the EU ETS.

In April the carbon floor price went up from £9.54 to £18.08 per tonne of CO2 in April. https://www.theguardian.com/environment/2015/apr/02/carbon-floor-price-hike-will-trigger-uk-coal-slowdown-say-analysts)

#### Other

A simplified regulatory framework is hoped for (considering there are the EU ETS and Climate Change Levy.)

The steel industry of which Tata Steel in Europe is a part is an industry like the power industry where it needs a lot of capital to progress things still very much in the development phase; increments don't come in small steps. European funds, particularly the ones the steel industry can access, are not enough. Tata would like greater appreciation for the need to fund decarbonising technologies & the scale of funding required to decarbonise the industry (to do this.)

Dynamic allocation is mentioned as a possible solution. http://www.ecofys.com/files/files/ecofys-2014-dynamic-allocation-for-the-eu-ets.pdf

David Hone at Shell said it was supposed to be a 40-year policy and so it should be left to do its job, and that a cap and trade approach becomes largely redundant because the economy sought sharp reductions.

An issue the EU ETS has faced in the last ten years is that businesses succeed to reduce carbon emissions, which reduces energy and compliance costs, but then the price is too low to drive technical innovation.

It begs the question whether companies would be so knowledgeable about how to reduce low carbon products if they had not faced the constraint of the EU ETS and other policies.

Positive feedback! Reducing carbon emissions makes processes more efficient; them becoming

more efficient reduces carbon emissions.

http://aceee.org/topics/energy-intensive-trade-exposed-industries

Steel is an EITE industry. If the British steel industry is subject the GHG restrictions, but an international competitor is not, the British steel industry would be at a competitive disadvantage.

Smart investments like decreasing total energy bills (subsidising?) and decreasing the necessity for purchasing emissions allowances (funding in the long term, I guess.)