ZEP ‘Low Emission, High Ambition: a Just Transition to a Net-Zero Europe’

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Economic narratives for a ‘just transition’?

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An economic and climate policy challenge

In meeting EU climate ambition, there is a need to retain and ultimately grow jobs and production activity within member states

Rather than risk displacing emissions and off-shoring jobs, investment and GDP to other countries where global climate impacts may outweigh any economic gain

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EU countries need an approach that permits emissions reductions where production is currently located

Highly industrialised regions such as North-Rhine Westphalia in Germany could reduce emissions by 95% in 2050 if connected to CO_2 transport and storage resources, such as offshore Netherlands or Norway, and retain existing assets and jobs

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ZEP report highlights need to develop economic narratives

Enabling a just transition to a net zero economy by protecting existing jobs and GDP in a competitive world

Norwegian SINTEF study titled 'Industrial opportunities and employment prospects in large scale CO_2 management in Norway'

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Two types of industries relevant to an economic 'multiplier' narrative

1. Energy-using/emitting industries – potential CO_2 capture
2. Fossil fuel supplying oil and gas industry – capacity and expertise to enable CO_2 transport and storage, and implementation of large scale CCUS projects
   - UK example – for each direct oil and gas industry job, a further 10 are required in domestic supply chain activity
   - Implication? Industry jobs hard to create – huge potential negative effects associated with any one industry job lost

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Case study: 'Making Germany's *Industriestandort* climate-ready'

Cement industry example: what kind of economic multipliers impact the economic 'just transition' narrative? What happens if production relocates?

[New work at CEP to more fully consider, quantify and firmly develop narratives around emissions reduction and employment retention in industrial supply chains in Europe]

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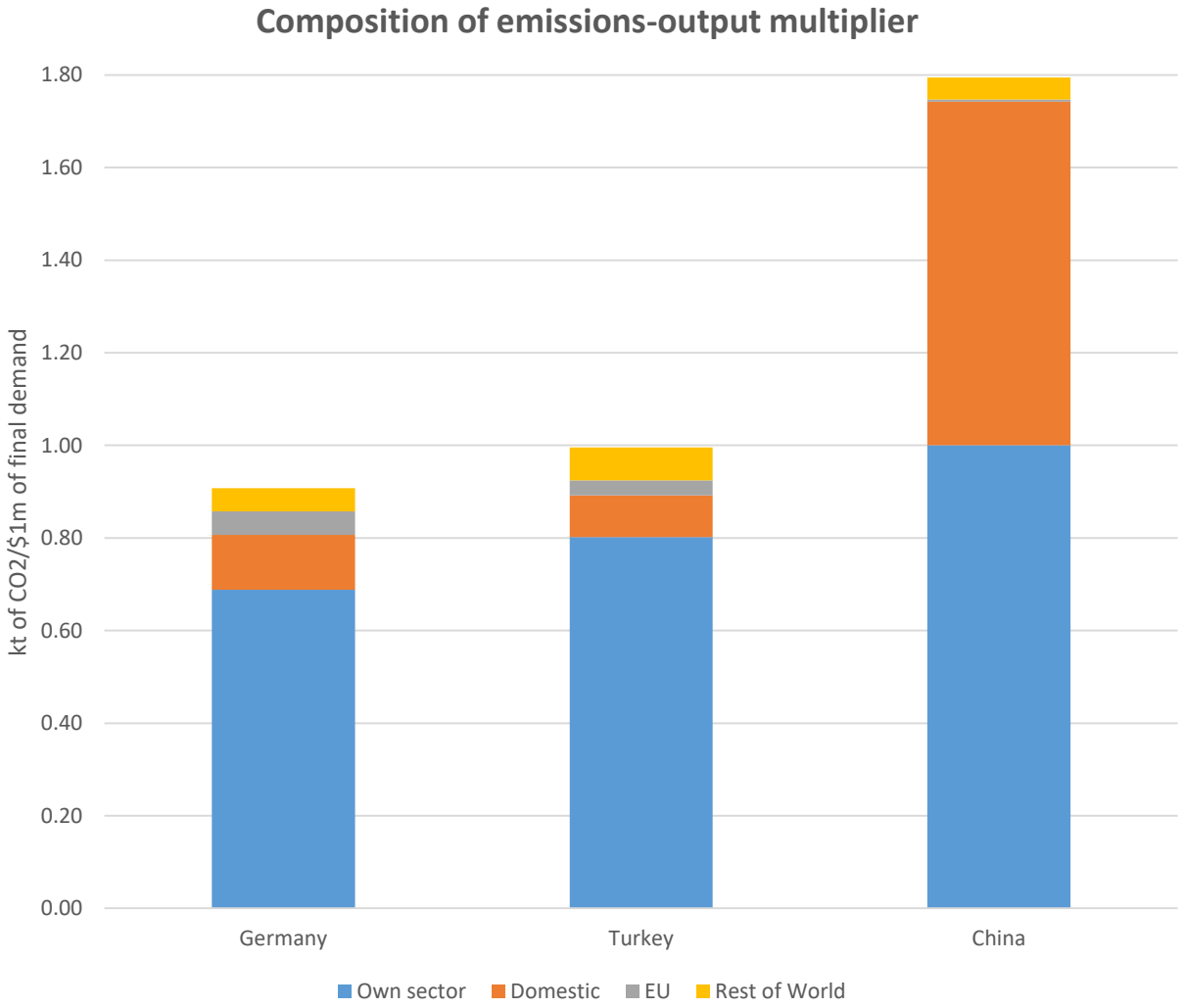

Carbon leakage/off-shoring?

- *'Own sector' included cement, lime, glass manufacture*
- *'Domestic' is other (supply chain) within nation*

- **Net *increase* in industry emissions per $1m production to service demand**
- Off-shore to Turkey – more of a reallocation between EU and ROW emissions
- Off-shore to China – big boost in industry and other domestic emissions
- Any change in transportation emissions not well accounted for here

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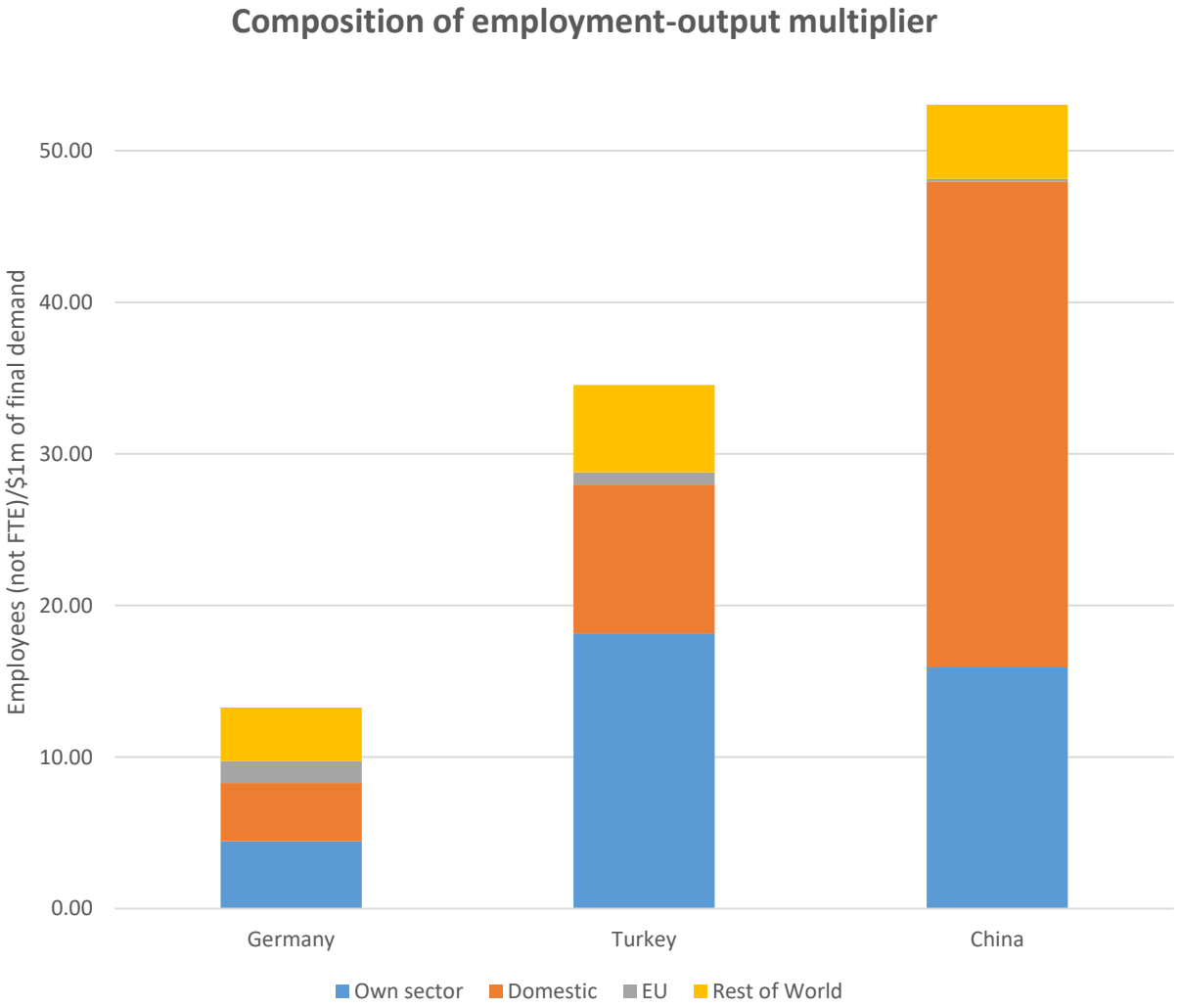

Jobs leakage/off-shoring?

- *NB. Head count rather than comparable full-time equivalent*

- **Net boost in global industry and supply chain employment**
- **But net losses to Germany's industry and supply chain**

- Off-shoring to Turkey – *some* recovery within EU, app. 20% of which to Germany
- But, per $1m off-shored, net loss of around 8 German jobs

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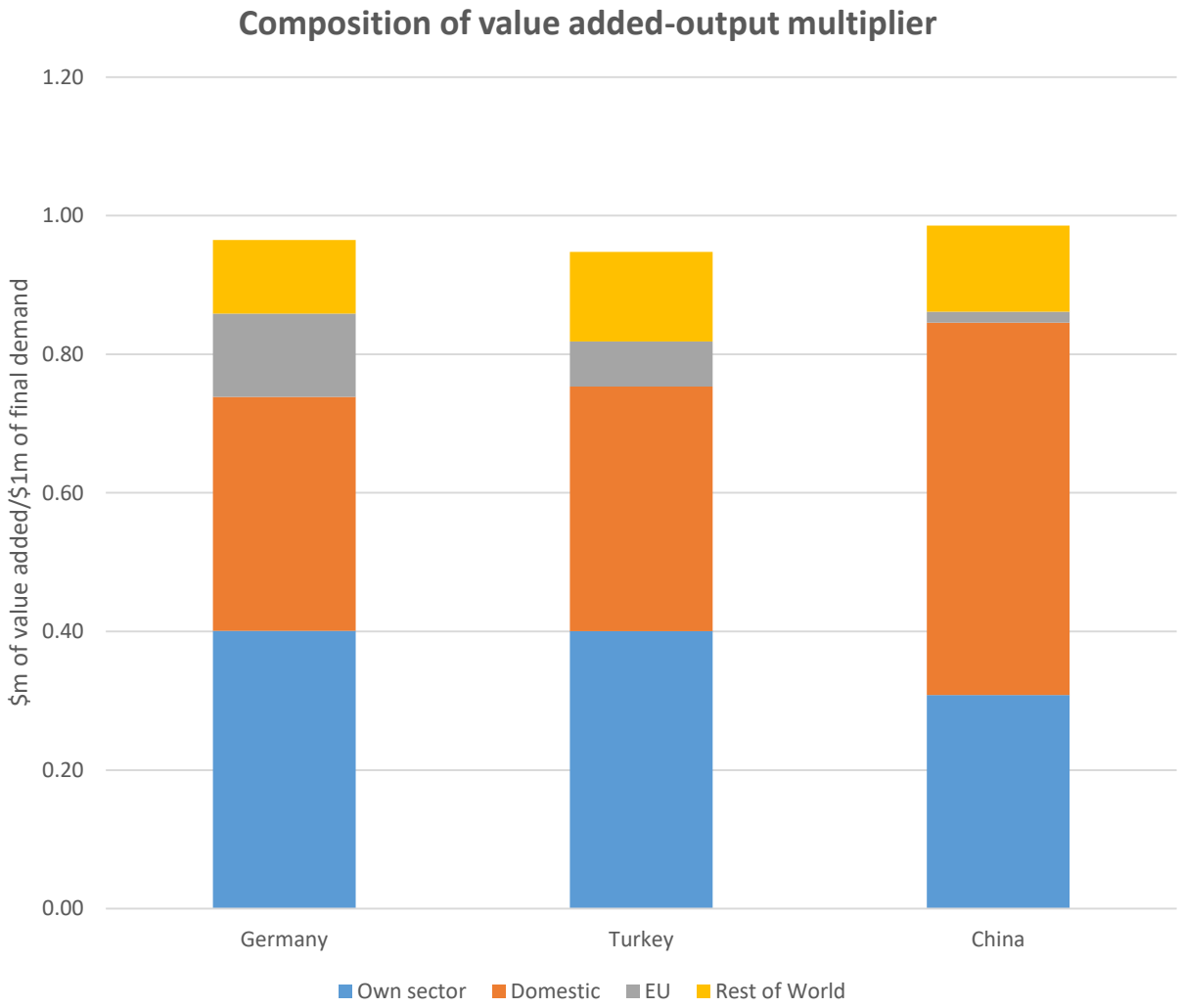

GDP leakage/off-shoring?

- **Reallocation of global value-added**
  - ***Implies higher value-added jobs in German case (both industry and supply chain)***
- **Again net losses to Germany's industry and supply chain**

- Off-shoring to Turkey – some recovery within EU, app. 25% of which to Germany
- But, per $1m, around $0.7m German GDP

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What narrative emerges to support a ‘just transition’?

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