



THE LONDON SCHOOL
OF ECONOMICS AND
POLITICAL SCIENCE ■



Grantham Research Institute on
Climate Change and
the Environment

Green policies and global supply chains

Antoine Dechezleprêtre, LSE

GGKP Conference, OECD

Domestic env'tal policies may green supply chains

- Green policies boost green innovation
 - Even the EU ETS! (Calel & Dechezleprêtre 2012)
- In a globalized world green policies also induce innovation in foreign countries
 - Dechezleprêtre & Glachant (2012): *Does foreign environmental policy influence domestic innovation? Evidence from the wind industry*
- Green policies induce technology transfer in foreign countries through trade and FDI
 - De la Tour et al. (2011): PV industry

Global supply chains lower the effectiveness of green policies

1. Global supply chains may allow pollution to be shifted rather than abated (“carbon leakage”)
2. Global supply chains weaken the ability of green policies to boost clean innovation

Global supply chains allow shifting pollution

- Sato & Dechezleprêtre (2013): *Asymmetric industrial energy prices and international trade*
- Evidence of carbon leakage: difference in energy price has a statistically significant effect on trade
 - 10% increase in energy price difference leads to a 1% increase in imports from the country which has relatively lower costs (bigger effect for energy intensive sectors)
 - Australia's \$23/ton carbon tax = 1% increase in imports
- However, the overall magnitude of this effect is small
 - Difference in energy prices explains less than 3% of the variation in trade

Global supply chains may discourage local clean innovation

- Batrakova & Dechezleprêtre (2013): *Is there a trade-off between 'dirty' imports and 'clean' innovation?*
- A higher share of 'dirty' imports from low-cost countries (China and India) decreases firms' propensity to develop new clean technologies
 - Firms substitute clean innovation with cheaper imports
- The share of US imports of intermediate goods coming from China and India has gone from 2% in 1990 to 10% in 2010

Conclusion

- Greening of supply chains through domestic green growth policies is not granted
- The net effect of global value chains on green growth policies is unclear
- A globalized world means policies are even more necessary
 - Green policies need to be implemented in emerging/developing countries to reduce asymmetry
 - International agreements
 - Border tax adjustment?

Thank you

A.Dechezlepretre@lse.ac.uk