Emissions from manufacturing embodied in international trade between 1990 and 2008

Mgr. Jana Vlčková

University of Economics in Prague, Czech Republic

Vojtěch Nosek and Josef Novotný

Charles University in Prague, Czech Republic

Ing. Antonín Lupíšek

Czech Technical University in Prague, Prague, Czech Republic

Keywords

Carbon dioxide, embodied emissions, international trade, product space

Abstract

Climate change and environmental policies are widely discussed. Much less is known about emissions embodied in goods traded internationally and the distinction between emission producers and consumers. In this paper, we focus on emissions from manufacturing embodied in international trade. We quantify the balance of emissions embodied in international trade and also map the global patterns of trade over the period 1990 up to 2008 using network analysis and constructing product space. We found that more countries have become net importers of carbon dioxide, net exporters exporting more carbon dioxide than before. Over the studied period many transforming countries have witnessed significant changes, especially those from Central Europe. The pattern based on 527 sectors is very different for developed and developing countries as well as for carbon dioxide net exporters and net importers.