

ABSTRACT:

CARBON LEAKAGE IN A SMALL OPEN ECONOMY: THE IMPORTANCE OF INTERNATIONAL CLIMATE POLICIES

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The literature offers estimates on carbon leakage effects of subglobal climate policies for large countries and climate coalitions. However, little is known about carbon leakage effects for small open economies. To fill this gap in the literature, we incorporate international climate policies relevant for a small open economy - like EU climate policies - into the general equilibrium model GTAP-E. We estimate carbon leakage effects for Denmark, but our framework could be employed on any EU member state. We find that a national economy-wide carbon tax is associated with a leakage rate of around 70 pct. Hence the global CO₂e emission reduction is about 30 pct. of the domestic reduction. We show that this is due to EU climate policies. We also present leakage rates for different sectors of the Danish economy and find large sectoral differences. These findings may have important policy implications, as an efficient leakage-adjusted climate policy imposes more lax regulation on leakage sensitive sectors.

(with Ulrik R. Beck and Louis B. Stewart)