

# National climate policy in a global, economic and environmental perspective

*Annegrete Bruvoll and Taran Fæhn*

## **Abstract:**

By means of a dynamic CGE model for Norway, we address two inter-jurisdictional concerns of unilateral environmental taxes in an open economy. The first is whether international competitiveness is shifted towards relative tax havens; the second is whether pollution leakages abroad tend to moderate the global sustainability of national environmental policies. We account for a regressed relationship between growth and CO<sub>2</sub> policy in projections for the Norwegian economy, which results in a 25 percent abatement in CO<sub>2</sub> emissions, along with substantial co-benefits in terms of emission reductions in other components. This is achieved at the expense of significant losses of competitiveness for the Norwegian export-oriented sectors to relative environmental tax havens, though, in the long run, Norwegian labour-intensive industries gain market shares, primarily at home. Our abatement achievements also come at another cost: the emission reductions are modified, though far from offset, by increased emissions for our trade partners.

**Preliminary draft - please do not quote without conferring the authors.**

## **Keywords:**

Climate policy; Dynamic CGE Model, Endogenous Policy; Environmental Kuznets Curve; Pollution leakage.

## **JEL classification:**

D58; O11; Q25; Q28; Q48

## **Corresponding author:**

Annegrete Bruvoll,  
Head of Research  
Statistics Norway,  
Research department,  
P.O.box 8131 Dep,  
N-0033 Oslo,  
Norway

Telephone: +47 21 09 49 48

Fax: +47 21 09 49 63

E-mail: [agb@ssb.no](mailto:agb@ssb.no)