

# Resource productivity, environmental tax reform and sustainable growth in Europe



## Industrial Energy Intensities in the UK

Is there a deterministic or stochastic difference among sectors?

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2008

*Applied Economics*

petrE (see <http://www.petre.org.uk/papers.htm>) is part of the Anglo-German Foundation research policy initiative: *Creating sustainable growth in Europe* (see <http://www.agf.org.uk/currentprogramme/CreatingSustainableGrowthInEurope.php>)



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## **Abstract**

Energy intensities of industrial subsectors differs widely due to differences in the final product and ultimately in the production process. The aim of this paper is to assess whether these differences are stochastic or deterministic. The analysis is implemented for a number of British industrial subsectors over the 1970-2004 and 1978-2004 time periods. This paper uses recent advances in univariate and panel unit root tests. It turns out that the results of the tests are very influenced by whether one allows for the presence of deterministic structural breaks. Only when modelling structural break, one can conclude that the evidence in favour of the long-term differences being deterministic outbalances the evidence pointing at their nature being stochastic. This supports the adoption of policy instruments which are applied across productive sectors in a way which is not affected by the short-run evolution of the sectors.