

## ABSTRACT

Submitted to 8<sup>th</sup> Annual Global Environmental Taxation Conference

### **THE IMPACT OF ETR ON INNOVATION IN THE ENVIRONMENTAL INDUSTRIES: THEORY AND EVIDENCE**

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It is often asserted that environmental tax reform (ETR) – the most fundamental effect of which is to change the relative prices of technologies, activities and inputs which are environmentally damaging in relation to those which are not – will encourage innovation, and that this will have positive economic, as well as environmental, effects, but this is not obviously the case and evidence to support the hypothesis is scarce. This paper first looks at theories of innovation to ascertain what impact on innovation they assign to relative prices. It transpires that relative prices may play a role in innovation but that changing relative prices is neither a necessary nor sufficient condition for innovation. Environmentally relevant innovation involves change: in technologies, in relation to processes, products or environmental emissions; in management structures or procedures; or in consumer behaviour. Particularly important may be the role of relative prices in changing consumers' and managements' perceptions and take up of existing technologies (for example, in relation to energy efficiency), but policy measures apart from ETR may play as great or a greater role than this. The paper will assess evidence on this score by looking at the various ETRs that have taken place in six European countries: Denmark, Finland, Germany, Netherlands, Sweden and UK.

Finally the paper will assess the possible effects of ETR on the environmental industries sector. The sector has been the subject of considerable recent analysis (e.g. European Commission 2006) and is often perceived to be fast growing and to be a possible future source of exports and economic prosperity. It is generally accepted that one of the main drivers of growth of these industries is environmental regulation, and it may also be that it could be stimulated by ETR. This research will look in detail at the various component subsectors of the environmental industries, which span a wide range of different economic sectors, to evaluate which subsectors might be stimulated by what kinds of ETR, and what the wider economic impacts of such innovation might be. The paper will be part of the output of ongoing research funded by the Anglo-German Foundation, and will report interim results of that research.

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