



## Environment policies can spur technological innovation

**The effects of new** environmental regulation on the ability of companies to compete and innovate are an important consideration for policy makers, with implications for the economy. New research focusing on clean, integrated technologies in the German car industry has found evidence that environmental legislation can improve innovation and productivity.

**'End-of-pipe' technologies** to curb pollution can be expensive, which leads some to argue that environmental performance conflicts with business competitiveness. However, integrated approaches to innovation which design technologies with built-in environmental advantages can trigger competitive advantages.

Around a third of environmental investment in the German manufacturing industry is on integrated technology. Of the 16 integrated product innovations studied in the automotive industry in Munich, four were primarily driven by legislation. Of the remaining innovations, five were predominantly the result of customer pressure, four were introduced to gain a competitive advantage, two were to cut costs and one was the result of company environmental policy. Innovation was often prompted by a combination of drivers, of which improved environmental performance was one. EU directives on future use of renewable energy, as well as national goals to reach the Kyoto protocol, played an important role in driving product innovation.

Lower production costs, new patents and higher skill levels gave the best increase in competitiveness resulting from environmental product innovation. Other benefits of innovation included increased exports, turnover and, in some cases, market share. The firms all had strong R&D capabilities, another important factor in their ability to successfully compete.

The study suggests that environmental policy can stimulate innovation and trigger a positive contribution to competitiveness if the policy goes hand in hand with company environmental strategy and customer requirements. Companies stressed that a sufficient planning strategy is necessary to successfully comply with environmental legislation.

In 2004 the European Commission adopted the Environmental Technologies Action Plan (ETAP)<sup>1</sup> to improve the development and wider use of environmental technologies. Such technologies include energy-saving car engines and recycling systems for wastewater in industrial processes. The Commission stated that Europe needs to invest more in innovative ways to protect the environment while boosting the EU's competitiveness. Environmental technologies can make a crucial contribution towards achieving this goal.

1. ETAP: [http://ec.europa.eu/environment/etap/index\\_en.htm](http://ec.europa.eu/environment/etap/index_en.htm)

**Source:** Triebswetter, U. and Wackerbauer, J. (2008). Integrated environmental product innovation and impacts on company competitiveness: a case study of the automotive industry in the region of Munich. *European Environment*. 18: 30-44.

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**Theme(s):** Sustainable consumption and production