ENVIRONMENTAL ECONOMICS

Air pollution regulation

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It is often assumed that economic growth leads to dangerous levels of pollution, with significant impacts on human health. However, in the United States, air pollution emissions from manufacturing have declined since 1990 despite an increase in manufacturing output. Understanding the underlying drivers of such decline can help design more-effective environmental policies.

Joseph S. Shapiro and Reed Walker of the University of California Berkeley, United States, analysed the reasons behind the decrease in emissions of nitrogen oxides, particulate matter, sulphur dioxide and volatile organic compounds from US manufacturing over the period 1990–2008. They show that emissions reductions are mostly due to changes in within-product emission intensity rather than changes in the level of production or in the composition of products produced. With a quantitative model linking trade with the environment, they estimate that the change in the overall environmental regulatory burden faced by manufacturers doubled between 1990 and 2008. The researchers show how such changes in environmental regulation, rather than changes in productivity and trade, explain most of the emissions reductions.

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