

ECONOMY-WIDE AND EMERGING ISSUES

Porter Hypothesis Meta-Analysis: Summary

Twenty years ago, Michael Porter and his coauthor Claas van der Linde challenged the conventional wisdom by suggesting that well designed environmental regulation could actually enhance competitiveness. Traditional economic orthodoxy at the time maintained that environmental regulation imposed an additional cost on firms which necessarily eroded their global competitiveness. To explain in a nutshell, environmental regulation such as technological standards, environmental taxes, and emissions trading systems require firms to divert a portion of their productive inputs to pollution reduction, thereby reducing firm competitiveness if those regulations are not universally applied. After all, if prospects exist for firms to profitably reduce their pollution emissions, profit-maximising firms would already be taking full advantage of these opportunities.

Porter and van der Linde showed via case studies that well designed environmental regulation may enhance, rather than reduce, firm competitiveness by generating 'innovation offsets' which not only improve economic performance, but which potentially offset the costs of compliance. By suggesting that environmental regulation might generate a 'win-win' situation for both environmental sustainability and firm profitability, the so-called Porter hypothesis has generated intense research among policy makers and academics alike over the past twenty years. Despite this depth of research, however, there is little consensus on the extent to which (if at all) well-designed environmental regulation might spur technological innovation and ultimately improve profitability.

Informed environmental policy which safeguards both environmental and economic sustainability relies on empirically rigorous research. The lack of clarity surrounding the evidence on the Porter hypothesis therefore represents a significant challenge for policy makers and academics alike. To address this challenge, Mark Cohen from Vanderbilt University and Resources for the Future and Adeline Tubb from the Institute of the Environment, together with a team of research assistants, are conducting a meta-analysis of the Porter hypothesis. Traditional narrative literature reviews are flawed in the sense that no objective criteria exist on which to evaluate the weight of evidence either supporting or refuting a hypothesis. Meta-analysis is an objective and statistically rigorous methodology for quantitatively evaluating conflicting research results, and therefore is not subject to the pitfalls of a traditional literature review.

To date, the research team has identified over 700 potentially relevant empirical publications examining the relationship between environmental regulation, innovation, and competitiveness and is currently systematically coding each publication to extract a slew of relevant quantitative and qualitative data. Statistical analysis of this data will shed light not only on direction and strength of the underlying relationship between environmental regulation and competitiveness, but also on the extent to which this relationship depends on factors such as the data and methodology used in the empirical analysis, the regulatory approach, the firm's sector and market conditions, the environmental problem being addressed and the firm's government and management approach. The results of this analysis will be of great interest to academics and policy makers, both to guide the future research agenda and in the formulation of practical and effective environmental policy.

Sustainable Prosperity is a national research and policy network, based at the University of Ottawa. SP focuses on market-based approaches to build a stronger, greener, more competitive economy. It brings together business, policy and academic leaders to help innovative ideas inform policy development.