Climate change: fiscal and international trade issues—introduction

Thiess Buettner · Christos Kotsogiannis

Published online: 27 March 2013
© Springer Science+Business Media New York 2013

Abstract The challenges to dealing with climate change are broad and complex. This special section reviews some of—but also brings new insights to—the challenges.

Keywords Global externality · Mitigation · Adaptation · Environmental uncertainty · International trade

JEL Classification C68 · D81 · F13 · F18 · H23 · H30 · Q54

Climate change is widely considered as one of the most serious and challenging issues currently facing the world. There is an increasing consensus—supported also by compelling evidence—that a significant portion of the average increase in global temperature is manmade and caused by emissions of greenhouse gases (especially carbon dioxide) into the atmosphere as a consequence of increased economic activity. If such tendency continues the stock of greenhouse gases, which dissipate very slowly, in the atmosphere is expected to alter climate substantially, and in many different ways, with serious, and in some cases possibly catastrophic, effects on the welfare of future

The papers that appear in the special section were all contributed papers to the CESifo Conference ‘Fiscal Implications of Climate Change’ that took place in Venice in July 2010. All papers have been subjected to the standard ITAX refereeing process. We thank the participants of the conference, the Editors of the Journal Jay Wilson (under whose editorship the special section was conceived) and Eckhard Janeba (under whose editorship the special section was completed) for their encouragement and advice. We also thank CESifo for generous support and, certainly not least, the referees who provided invaluable help in the evaluation process of these papers.

T. Buettner
University of Erlangen-Nuremberg, Nuremberg, Germany

C. Kotsogiannis (✉)
University of Exeter Business School, Exeter, EX4 4PU, UK
e-mail: c.kotsogiannis@exeter.ac.uk

generations. It will, too, affect public finances—and both sides (tax and spending) of government accounts.

Climate change, in economic terms, is a global externality: Emitters of greenhouse gases ignore the damage they cause others, thereby emitting more than it is desirable from a *collective* perspective. Climate change, thus, suffers from—in fact, is caused by—a collective action problem: A unilateral reduction in emissions by one country reduces the marginal benefit of abatement to others thereby increasing their incentive to abate less. It is also a particularly complex externality, given the asymmetric impact of the stock of emissions on the geographical distribution and economic activity.

All this suggests that public intervention to limit harmful emissions is required. But given the complexity of the problem the design of policy and the choice of fiscal instruments (either for ‘mitigation’ or ‘adaptation’) is a particularly difficult task. Intergenerational equity considerations, for instance, require ‘appropriate’ weights on the trade-off between the present and the future. There is also pervasive uncertainty, both in the science of climate change and on the long-term impact of greenhouse gases. Fiscal measures for mitigation are also likely to interact with other market failures. And, of course, international coordination and international trade issues—as experience has shown—makes things even more complex, and slow-moving.

Though the literature is fairly sizeable, yet very few attempts have been made to systematically discuss the fiscal implications of climate change. This special section of the *International Tax and Public Finance* is precisely devoted to this theme.

We will resist the temptation to provide a detailed ‘reader’s guide’ to the individual papers presented in this special issue: The difficulty with doing this is that each paper discusses so many facets and it will be nearly impossible to do justice to all these in a short space. What is clear, however, is that all papers deal with a topic that is not only policy relevant but also full of deep challenges for economic research.

Accepted papers for the special section ‘Climate Change: Fiscal and International Trade Issues’.

1. Benjamin Jones, Michael Keen, and Jon Strand: ‘Fiscal implications of climate change’.
2. Konstantinos Angelopoulos, George Economides, and Apostolis Philippopoulos: ‘First-and second-best allocations under economic and environmental uncertainty.’
3. Xiao Chen, and Alan Woodland: ‘International trade and climate change’.

Note to Readers

Please note that an article intended for this special section was inadvertently placed in a prior issue of this journal.

The article in question, “Fiscal implications of climate change”, authored by Benjamin Jones, Michael Keen, and Jon Strand, accidentally appeared in the February 2013 issue of the journal (Vol. 20, No. 1, pp. 29–70).

For readers’ ready reference, here is the abstract of the article:

Abstract Climate change is an externality problem—so the challenges that arise in limiting it and dealing with the effects that remain are largely fiscal. The structure of the problem, however, and the uncertainty which surrounds it, make the design of

proper policy responses particularly complex. This paper provides a primer on the fiscal implications of climate change, the aim being to provide a (reasonably) quick and comprehensive overview of the main analytical issues and lessons learned.

Keywords Climate change · Carbon pricing · Adaptation mitigation

And here is a link to the article in its entirety:

<http://dx.doi.org/10.1007/s10797-012-9214-3>.