

CIGI
POLICY
BRIEFS

CIGI Policy Briefs present topical, policy-relevant research across CIGI's main research themes. Written on an occasional basis by CIGI's research fellows and staff, the goal of this series is to inform and enhance debate among policy makers and scholars on multifaceted global issues.

Available for download at:
www.cigionline.org/publications

Climate Change-Related Border Tax Adjustments

Ben Lockwood and John Whalley

Proposals are now emerging for border tax adjustments (BTAs) to accompany commitments to reduce carbon emissions in the European Union, United States, and other OECD economies. We call these climate change-related border tax adjustments. Such climate change-related BTAs could be an integral part of a multilaterally negotiated package of commitments for a post-Kyoto (2012) global arrangement, unilaterally declared commitments, or simply follow on after the initial negotiations or commitment.

Current thinking in policy circles is that domestic producers will bear added costs from climate change initiatives. Emission reduction initiatives thus create a competitive disadvantage for domestic producers if reductions in one region are larger than in others. As a result, BTAs will likely form part of the negotiating activity in Copenhagen in 2009 when negotiations conclude on a post-Kyoto world after 2012. Some form of country-specific trade-based remedy is viewed as reasonable to maintain the competitiveness of domestic industries when responding to global environmental problems with emissions reduction efforts that raise costs more than elsewhere. The potential therefore exists for the evolution of a world in which large entities in the OECD go green and protectionist at the same time.

Perhaps not surprisingly, trade economists view this prospect as a potential threat to the functioning of the global trading system since the resulting trade measures could retard trade and slow growth, and violations of WTO commitments could occur. Those in lower-income countries in Africa, South America, Asia, and Europe (and especially in Russia) also see such measures, which will restrict their market access and cause major dislocation of their trade, as a threat to their well-being.

Despite its current carbon manifestation, the issue of border tax adjustments and their effects on trade is hardly new. Indeed, the older analytical literature on BTAs is highly relevant to the current debate on their use. Earlier debate on BTAs occurred following the adoption of the value-added tax (VAT) by a number of European countries as a tax harmonization target in the early 1960s (see Dossier 1967; Shibata (1967; Krauss and Johnson 1972).

The Europeans agreed that their harmonized VAT would be administered on a destination basis and hence would involve taxes on imports and a rebate of taxes on exports. US businesses initially viewed this arrangement as conferring a trade advantage on



Ben Lockwood is Professor of Economics at the University of Warwick, UK. He has published widely on the empirical and theoretical aspects of tax competition and fiscal decentralization. Prof. Lockwood is a Fellow of the Centre for Economic Policy Research, UK, and the Global Economy Group, CESifo, at the University of Munich. He is on the editorial boards of *Finanzarchiv*, *International Tax and Public Finance*, and the *Journal of Macroeconomics*.

ISSN 1915-8211 (Print)

ISSN 1915-822X (Online)

The opinions expressed in this paper are those of the author and do not necessarily reflect the views of The Centre for International Governance Innovation or its Board of Directors and/or Board of Governors.



Copyright © 2008 Ben Lockwood, John Whalley. This work was carried out with the support of The Centre for International Governance Innovation (CIGI), Waterloo, Ontario, Canada (www.cigionline.org). This work is licensed under a Creative Commons Attribution – Non-commercial – No Derivatives License. To view this license, visit (www.creativecommons.org/licenses/by-nc-nd/2.5/). For re-use or distribution, please include this copyright notice.

European firms. The argument was that US exports to Europe would have to cross a tariff barrier, while European exports to the United States would face no such barriers because of the remission of domestic taxes. In the academic literature of the time, however, it was pointed out that the difference between an origin basis (taxes on domestic production, imports are tax free) and a destination basis (taxes rebated on exports, taxes apply to imports) is the same as that between a production tax and a consumption tax: both, in the broadly based case, are neutral and neither has direct effects on trade.

In a world in which taxes are broadly based on all commodities, the argument was that moving the VAT from an origin to a destination basis would simply change the price level (or the exchange rate); it would have no protective effect, and so the use of a destination-based tax would confer no trade advantage on Europe. The United States, which had been pushing for a negotiation on BTAs as part of the then-emerging Tokyo Round in the GATT, accepted this analytical argument and changed its policy approach, and there the issue of BTAs stood until its recent manifestation as a proposed accompaniment to carbon emissions control.

Essentially the same arguments apply to today's climate change-related BTAs as to destination-based VATs in the 1960s. Again, in the current debate, there seems to be a misconception about the price-level effects and relative price effects that stem from BTAs; also that the effects of a BTA should be viewed as independent of the motivation for the adjustment. A BTA can be motivated by any one of a number of issues, including differential labor standards, social programs, and government-provided health care, and other considerations. The fact that the current debate is driven by carbon emissions reduction should be seen as largely irrelevant to an assessment of the impacts of the BTAs themselves. And if the BTAs accompanying carbon emissions reductions are broadly based, the discussion of earlier years still applies: there will be both a price-level effect as well as a relative price effect, and the former will have no real effects on trade flows or domestic industry, despite their intent.

In evaluating actual climate change-related BTAs, one has to acknowledge that tax adjustments will likely occur at different rates for key products and sectors. However, even in cases involving product- or sector-specific BTAs, one can again produce neutrality provisions for the tax basis change if there is sufficient sector specificity in inputs. In essence, the lessons of the old literature on the neutrality of BTAs will have been lost if the current debate focuses on sector- (or product-) specific climate change-related border tax adjustments. That literature needs to be rediscovered, and there needs to be a clearer articulation of the likely effects that the use of BTAs would generate.

The more recent issue of climate change-related BTAs initially surfaced as part of the general discussion of leakage associated with country or regional carbon commitments that went unmatched by others. Most of the debate has centred on the compatibility of such measures with the rules of the World Trade Organization (Demaret and Stewardson 1994; Goh 2004; De Cendra 2006; and Ismer and Neuhoff 2007). Relatively little debate has focused on what the impacts of these border adjustments would actually be.

Among the countries (or regions) that have embarked on what they see as stricter climate policies, emissions reductions in these countries are seen as generating accompanying leakage through a shift in consumption from domestically produced carbon-intensive goods towards now cheaper importable substitutes.

Relocation of production to areas or regions without carbon pricing is a further possible outcome. BTAs are deemed to mitigate these effects and to give more certainty for those involved in emissions reduction initiatives when making long-run investments in various key sectors.

The motivation for these new climate change-related proposals is the need to offset the competitive disadvantages that are associated with commitments on carbon emissions reductions of the type currently proposed in the European Union and possibly eventually in the United States, and legislation is pending on these matters in both cases. However, the older BTA literature stresses the potential neutrality of such tax measures, and seemingly separates out the price-level effects and relative price effects involved in assessing the impact of BTAs. One also has to separate the motivation for their use from an assessment of their actual impact. Their potential price-level effects could likely have little or no impact on trade flows, and even offer an offset to either leakage or competitive disadvantage from cost impacts of emissions commitments on domestic producers.

Hence, what may appear as an offset to competitiveness effects of environmental policies may not be so. Indeed, the seeming relative price effects themselves may not even have an impact on trading patterns if there is sufficient specificity in the production technology. If rents are involved, either with sector-specific wage rates or through specific factors that would absorb the effects of the tax change, again there would be no effect on trade. Finally, BTAs are not the only instrument available for the chosen objectives; manipulation of corporate tax rates and tax structure could be others.

All of these issues thus seemingly have to enter any evaluation of what climate change-related BTAs might actually achieve.

Works Cited

- Brewer, T. (2008) "US Climate Policy - Trade Policy Intersections, Current Status, Prospects and Implications for Carbon Leakage," Presentation to the Climate Strategies Carbon Leakage Workshop, (4 February) Paris.
- De Cendra, J. (2006) "Can Emissions Trading Schemes Be Coupled with Border Tax Adjustments? An Analysis vis-à-vis WTO Law," *Review of European Community and International Environmental Law*. 15 (2): 131-45.
- Demaret, P., and R. Stewardson (1994) "BTA under GATT and EC Law and General Implications for Environmental Taxes," *Journal of World Trade*. 28 (4): 5-65.
- Dosser, D. (1967) "Economic Analysis of Tax Harmonization," In *Fiscal Harmonization in Common Markets, Theory Vol. 1*, edited by C.S. Shoup. New York: Columbia University Press.
- Goh, G. (2004) "The World Trade Organization, Kyoto and Energy Tax Adjustments at the Border," *Journal of World Trade*. 38 (3): 395-423.
- Ismer, R., and K. Neuhoﬀ (2007) "Border Tax Adjustment: A Feasible Way to Support Stringent Emission Trading," *European Journal of Law and Economics*. 24 (2): 137-64.
- Krauss, M.B., and H.G. Johnson (1972) "The Theory of Tax Incidence: A Diagrammatic Analysis," *Economica*. 39 (156): 357-82.
- Shibata, H. (1967) "The Theory of Economic Unions: A Comparative Analysis of Customs Unions, Free Trade Areas, and Tax Unions," In *Fiscal Harmonization in Common Markets, Theory Vol. 1*, edited by C.S. Shoup. New York: Columbia University Press.



John Whalley is a CIGI Distinguished Fellow and Fellow of the Royal Society of Canada. Author of numerous scholarly articles, he is one of Canada's pre-eminent experts in the study of global economics. His current positions include William G. Davies Professor of International Trade and Co-Director of the Centre for the Study of International Economic Relations, Department of Economics, University of Western Ontario; Research Associate, National Bureau of Economic Research in Cambridge, MA; and Coordinator, Global Economy Group, CESifo, University of Munich. He holds a BA in Economics from Essex University (1968), and an MA (1970), M.Phil (1971) and a PhD (1973) from Yale University.

CIGI was founded in 2002 by Jim Balsillie, co-CEO of RIM (Research In Motion), and collaborates with and gratefully acknowledges support from a number of strategic partners, in particular the Government of Canada and the Government of Ontario. CIGI gratefully acknowledges the contribution of the Government of Canada to its endowment Fund.

Le CIGI a été fondé en 2002 par Jim Balsillie, co-chef de la direction de RIM (Research In Motion). Il collabore avec de nombreux partenaires stratégiques et exprime sa reconnaissance du soutien reçu de ceux-ci, notamment de l'appui reçu du gouvernement du Canada et de celui du gouvernement de l'Ontario. Le CIGI exprime sa reconnaissance envers le gouvernement du Canada pour sa contribution à son Fonds de dotation.



The Centre for International
Governance Innovation
Centre pour l'innovation dans
la gouvernance internationale

57 Erb Street West
Waterloo, Ontario, Canada N2L 6C2
tel +1.519.885.2444 fax +1.519.885.5450
www.cigionline.org