

The Economist

Free exchange
Air trade

Can trade restrictions be justified on environmental grounds?

Feb 23rd 2013 | [From the print edition](#)



CARBON markets look green around the gills. The price of carbon on Europe's emissions-trading system, the world's biggest, has slumped. Barack Obama's hope of getting a cap-and-trade proposal through Congress seems as distant as ever. There is no sign of action in places like India and Brazil. But it is easy to forget how far carbon markets have come. They exist or are on their way in Europe, Australia, California, China and South Korea. One day, carbon prices will vary greatly between countries.

When they do, those with higher carbon prices will be at a competitive disadvantage because the cost of emitting carbon will be embodied in the overall price of goods, raising them relative to goods produced in countries with no or low carbon prices. A new study* by Aaditya Mattoo of the World Bank and Arvind Subramanian of the Centre for Global Development, a think-tank in Washington, DC, looks at how big this disadvantage might be. They reckon that, if rich countries were to impose unilateral restrictions upon themselves to reduce their carbon emissions in 2020 to 17% below what they had been in 2005, the measure would cut exports of energy-intensive manufactured goods by 12% in America, and boost US imports of those goods by 4%.

In this section

[Reprints](#)

Related topics

Would a border tax be justified to offset this competitive disadvantage? The idea, the two economists argue, would not necessarily be protectionist. If domestic producers are required by law to purchase carbon allowances—ie, to pay a

carbon price, which is incorporated into prices of the final product—then this is like a consumption tax. Trade law permits consumption taxes to be levied on imports to level the playing field between importers and domestic producers (though, admittedly, the World Trade Organisation has not yet decided whether carbon tariffs are permitted).

In addition, says Paul Krugman, a professor at Princeton University and a columnist for the *New York Times*, border taxes on carbon can be justified on the ground that they align incentives behind the goal of cutting carbon emissions. “If you only impose restrictions on greenhouse-gas emissions from domestic sources,” he has argued in his blog, “you give consumers no incentive to avoid purchasing products that cause emissions in other countries.” If the makers of those products are dirtier and more polluting, the result would be an increase in emissions.

So the idea might be defensible in theory. In practice, though, carbon tariffs could be abused for protectionist purposes, so how they are imposed matters a lot. The obvious way would be to set a tariff based on the carbon content of imports. If America had a carbon price of \$10 a tonne and if 20 tonnes of carbon were emitted during the production of, say, a Malaysian car, then America could impose a carbon tariff of \$200 on cars imported from Malaysia. But there are two problems with this approach.

The first is that a tax of this sort would be extremely hard to implement. Knowing what the carbon content of imports actually is would be tough. Worse, a car from Malaysia made of steel imported from energy-efficient Brazil should presumably be taxed at a different rate from the same Malaysian model made of steel from energy-inefficient Russia. That would be bizarre.

The second problem is that the tariffs would be punitive. Emerging markets like China and India use a lot of carbon in their manufacturing: more than 500 tonnes for every \$1m of output. By comparison, America uses 200 tonnes and Europe and Japan less than 100 tonnes. So the tariff required would have to be huge: rich countries would impose a 21% tariff on Indian manufactures and 26% for goods made in China, reckon Messrs Mattoo and Subramanian. This would hammer the giants’ manufacturing: the economists calculate that such a tax would mean a 20% cut in Chinese manufactured exports and a 16% fall for India. Environmentalists might applaud. But such a drastic reduction would produce a slump in world trade—the two economists reckon global welfare would fall by 1%. And that is to say nothing of the unfairness of penalising China and India so heavily for making products whose end-users are mostly Europeans and Americans.

This is not the only sort of carbon tariff, however. The authors suggest that it would be better to impose a tax on imports which is based on the carbon content of domestic production (ie, by assuming that imports contain an amount of embedded carbon equal to that in goods made in America or Europe). This approach would tax imports uniformly, applying the same rate to goods from dirty India as from greener Brazil. But it would be easier to calculate, and has the advantage of not slashing trade. Manufactured exports would decline by 3% in China and India, the economists calculate. That strikes a better balance between taxing emissions and not wrecking the world economy.

C sweet

There is a final twist. Trade theory says a tax on imports is equivalent to a tax on exports because it changes the relationship between domestic and foreign prices in the same way. So a carbon tariff would penalise exporters twice: once when they pay the domestic carbon price and again, indirectly, through the border tax. The authors suggest an import tax based on the carbon content of rich countries’ production but with a rebate for exporters. This reduces the competitive losses of American and European energy-intensive manufacturing and moderates the impact on Chinese and Indian manufactured exports without changing the cut in global carbon emissions. Their analysis is bitter-sweet, however. Messrs Mattoo and Subramanian provide an answer to how a system of carbon tariffs might be designed. But in so doing, they show the practical and political complexities involved.

* “Greenprint: A New Approach to Co-operation on Climate Change”, Centre for Global Development

Economist.com/blogs/freeexchange

[From the print edition: Finance and economics](#)

Copyright © The Economist Newspaper Limited 2013. All rights reserved. [Accessibility](#) [Privacy policy](#) [Cookies info](#)

[Terms of use](#)

[Help](#)