

International Trade and Green Growth

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International Trade and Green Growth: Outline

- Effects of environmental policy on international competitiveness
- How does international trade affect the design of environmental policy?
- Natural capital (renewable resources) and trade
- Global environmental problems

Effects of environmental policy on international competitiveness

- Is there are tradeoff between international competitiveness and environmental quality?
- Does more stringent environmental policy
 - reduce net exports in pollution-intensive industry?
 - reduce foreign investment in pollution-intensive industry?
- In many sectors there is either no trade-off between international competitiveness and environmental policy, or at best a short run tradeoff.

Competitiveness and Natural Capital

- Examples include deforestation, fisheries depletion, soil erosion, or toxic emissions that harm human health
- Weak environmental policy may yield short run income gains if trade induces increased production, but long run income losses as increased market pressures lead to depletion of the resource stock
- In such cases, effective environmental policy is an important component of a policy aimed at developing **long run** international competitiveness.

Consumption-generated pollution

- Policies aimed at consumption-generated pollution (such as automobile emissions) apply to all goods used in a country – both foreign and domestically produced goods have to meet the same emission standards.
- Tighter standards raise costs for both domestic and foreign producers and hence domestic firms need not be disadvantaged.

Production-generated pollution

- Examples include air and water pollution from manufacturing
- There is evidence (mostly from the US) that tightening up environmental policy in the manufacturing sector has a negative, albeit usually small, effect on indicators of international competitiveness such as net exports or new investment in the affected sectors
- However, factors such as capital abundance, labour abundance, location, institutions, and agglomeration effects are more important than environmental policy in determining firm location choice and competitiveness

Evidence from developing / newly industrializing countries

- Dean, Lovely, and Hwang (2009):
 - Use data on variations across provinces in China in charges for water pollution
 - More stringent regulation had a negative effect on investment from ethnically Chinese source countries (Hong Kong, Macao and Taiwan) in highly polluting sectors.
 - However environmental policy had no statistically significant effect on investment from other countries.
- Most other studies use only data on emission regulations in OECD countries. Results are mixed – little persuasive evidence that these regulations cause a pattern of relocation to countries with relative weak environmental policy.

Welfare vs. competitiveness in polluting industries

- Weak environmental policy is effectively a subsidy for pollution-intensive industry or pollution-intensive production techniques
- A decline in international competitiveness in polluting industries does not mean there is an overall decline in national international competitiveness
- Removing the implicit subsidy (tightening up environmental policy) nudges the economy towards a cleaner growth path
- The case for effective and efficient environmental policy is just as strong in an open economy as in a closed economy

Trade and the design of environmental policy

- Should the tradable sector be shielded from stringent environmental policy?
- Theory suggests that answer is "no", because it would increase the overall social cost of meeting environmental quality targets
- If there are learning spillovers and agglomeration effects, there can be arguments to promote some economic activities at the expense of others.
- Firm-level *emission intensity targets* may be one option when there are reasons to promote the tradable sector. They encourage cleaner production techniques, but have weaker output-reducing effects than some other environmental policies

Natural capital

- Economic growth and environmental quality are often discussed as if they are substitutes
- Not true when the sustainability of natural capital is essential to human health or as an input into production.
- Several studies have found that export pressures have contributed to the collapse of various fish stocks
- Ferreira (2004) found that trade led to significant deforestation only in countries with weak enforcement of property rights.
- Good institutions and enforcement are critical to the sustainability of natural capital; especially in an open economy.

Global environmental problems and trade

- Numerous environmental problems are transboundary or global in scope:
 - Biodiversity, international fisheries depletion, cross-border air pollution, climate change
- Trade plays several critical roles; two most prominent are:
 - Linkage between trade and environmental agreements
 - Leakage: reduced pollution in one jurisdiction may be offset by increased pollution elsewhere

Climate Change, Leakage and Border Taxes

- Concerns about carbon leakage have increased the likelihood that some form of border taxes may be imposed on imports of carbon intensive goods from countries that do not join a coalition to reduce emissions.
- Several studies have found that border taxes would mitigate carbon leakage, but that the major consequence of such policies would be to shift some of the costs of emission reductions from developed to developing countries via terms of trade effects.

Leakage and Border Taxes: Responses

- Developing countries can object to border taxes on fairness and other grounds.
- However, major emission reductions may not be politically feasible in developed countries without some mechanism to deal with leakage.
- It is therefore useful to consider alternative policies that mitigate leakage but avoid shifting abatement costs to developing countries
- Export taxes or voluntary export restraints applied to carbon-intensive production, for example, are likely to be preferable to an import tax-based regime.

Gaps in our knowledge

- Very little work on the effects of environmental policies on competitiveness uses data from developing countries
- There are relatively few systematic studies of the interaction between openness to trade, natural capital depletion, and long run growth
- Estimates of carbon leakage vary significantly across models. A careful analysis of the key factors in the models that drive these differences would be informative.
- An exploration of alternative possible negotiated agreements (such as export taxes aimed at neutralizing leakage effects) would also be fruitful