Environmental Issues in a Trade Context

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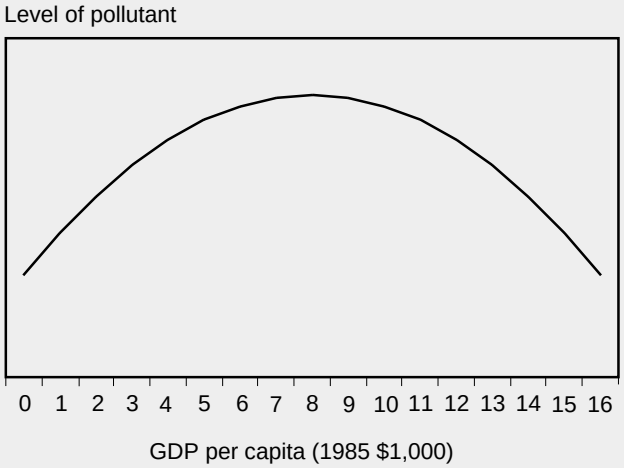
As trade and investment become increasingly globalized, conflicts between trade matters and environmental concerns gain in prominence. Economic efficiency occurs when trade distortions are eliminated and externalities are internalized. Multilateral trade negotiations seek to reduce trade distortions that may hinder economically efficient levels of production and consumption in world markets, and thus stimulate economic growth. Environmental policies attempt to internalize externalities and protect environmental goods and services (e.g., clean air, wetland water quality functions) for which there may not be readily observable market values. WTO trade rules may infringe on environmental policies, and likewise environmental policies may conflict with WTO trade rules. For example, the United States imposed a ban on imports of shrimp caught without turtle exclusion devices. Because some countries were given technical assistance and longer transition periods to alter their production technology than other countries, the WTO dispute settlement panel found this environmental regulation violated the United States' WTO obligations. The inherent tension between trade and environmental objectives raises two related issues: (1) to what extent does trade liberalization help or harm the environment, and (2) if harm results, what can be done to allow domestic environmental laws to satisfy national preferences for environmental protection without violating the country's WTO obligations?

The environmental effects of trade are commonly grouped into three categories — a "scale effect," a "technique effect," and a "composition effect." Greater economic growth, stimulated by greater trade, has the potential to harm the environment through a greater scale of resource use (Beghin and Potier, 1997). In other words, increased output may generate additional pollution and accelerate natural resource depletion. On the other hand, trade liberalization also has the potential to improve environmental outcomes through a technique effect (i.e., how goods are produced). For example, foreign direct investment may facilitate the diffusion of green technologies when advanced production techniques are transferred to LDCs. Similarly, trade liberalization may impact the environment through a composition effect (i.e., what goods are produced) (Farrentino and Linkins, 1999). For example, phasing out tariffs on textiles under the Multi-Fibre Agreement, as is scheduled under the Uruguay Round, may induce LDCs to shift production from heavy industries to less pollution-intensive textiles. This end result would tend to lower emissions in LDCs but the scale effect may more than offset these gains for five pollutants studied (Cole, Rayner, and Bates, 1998). For any given sector or pollutant, however, *a priori*, the net environmental impact of these short-run effects is ambiguous.

In the long run, the effect of economic growth on the environment, trade induced or not, follows a predictable pattern. The environmental Kuznets curve (EKC) reflects the hypothesis that as incomes rise from an initially low level, polluting emissions are likely to increase, but eventually, as incomes continue to rise, polluting emissions tend to decrease. In other words, the scale or negative composition and technique effects may dominate until incomes rise to the point where an increased demand for environmental amenities causes the positive technique and composition effects to dominate. Strengthened regulations and/or enforcement usually accomplish this change. Though the exact shape of the EKC varies by pollutant, most pollutants' mean air and water concentrations begin to decline before per capita incomes reach $8,000 (approximately that of South Korea) (Grossman and Krueger, 1995). Other studies, however, show quite a range of turning points, again varying by pollutant (e.g., Nordstrom and Vaughan, 1999). Per capita income clearly affects a nation's preferences for environmental regulations and these differences create the potential for conflict as countries strive to achieve divergent environmental goals while meeting their WTO obligations.

Voicing concerns over the effects of trade liberalization on the environment, 14 U.S. environmental organizations, including the Sierra Club, the World Wildlife Fund, and Greenpeace USA, presented the U.S. Trade Representative's Office with suggestions for the U.S. position in future WTO negotiations (Downs, 1999). In general, the groups' proposal opposes further trade liberalization, especially in sensitive sectors such as forest and fish products. Also, the organizations insist that environ-

Stylized Environmental Kuznets Curve



mental impacts of proposed trade liberalization should be assessed on a global basis, and if environmentally and socially beneficial outcomes are not anticipated, then the assessment must propose institutional, legal, and policy changes before trade negotiations may proceed. These environmental organizations call for reform of WTO rules and procedures, specifically for increased public input into more transparent decision-making processes.

The Declaration of Principles on Trade and Environment issued by the Office of the U.S. Trade Representative encapsulated the U.S. position. To promote sustainable development the United States will pursue trade negotiations through the following actions:

- Taking fully into account environmental implications throughout the course of the negotiations, including by performing a written environmental review.
- Promoting institutional reforms to ensure that the WTO and its processes, notably dispute settlement, are transparent and that the public may contribute to its work.
- Strengthening cooperation between the WTO and international organizations with respect to environmental matters.
- Identifying and pursuing "win-win" opportunities where opening markets and reducing or eliminating subsidies hold promise for yielding direct environmental benefits.
- Complementing U.S. trade policies with policies that provide for high levels of environmental protection and effective enforcement of U.S. laws.
- Ensuring that trade rules are supportive of and do not undermine the Nation's ability to maintain and enforce fully its environmental laws.
- Ensuring the appropriate inclusion on U.S. trade negotiation teams of environmental, health and safety officials, and encouraging U.S. trading partners to do likewise (USTR).

Coordination between trade and environmental strategies offers policymakers a means to garner the economic efficiency gains of trade liberalization while minimizing environmental degradation. A study of Mexican agriculture (Beghin, Roland-Holst, and van der Mensbrugghe, 1997) shows that trade liberalization alone may increase emissions of some pollutants but that if combined with domestic effluent taxes, these increases are greatly mitigated. Indeed, with this coordinated approach, a "win-win" result emerges in many sectors as pollution decreases while GDP increases from improved allocative efficiency. This coordination between trade and environmental policies "recognizes the fact that most environmental problems originate in production and consumption, but rarely in trade per se" (Beghin and Potier, 1997). Nonetheless, since trade may exacerbate domestic environmental externalities, anticipating those sources of environmental stress in order to internalize them with domestic policy instruments maximizes the net welfare gains from trade liberalization. The optimal policy instruments and stringency of environmental regulations, however, should be expected to vary across countries with different per capita incomes and initial environmental conditions. Reconciling WTO obligations with divergent national preferences for environmental protection poses substantial challenges for future trade negotiations.

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