CHAPTER FOUR

Power, Culture, and the Environment

GLOBALIZATION IS NOT JUST AN ECONOMIC phenomenon. It changes power relationships, cultures, and the environment. This chapter considers these effects.

Globalization and power

GLOBALIZATION CHANGES POWER RELATIONSHIPS. AT THE level of international relations, it changes the power of developing countries relative to that of developed countries. At the level of domestic politics, it changes the power relations between government, business, and civil society. Most fundamentally, it changes the prospects for peace—both within countries and between them.

Globalization and the international distribution of power

Undoubtedly, the first two waves of globalization—the period up to 1980—increased the power of the rich countries relative to others. This was a concomitant of widening inequality between countries. As discussed in Chapter 2, international institutions such as the GATT were created by and for rich countries. Even during this period, the club of rich countries was open to new non-western members: Japan became a major global force. However, the global institutional architecture inherited from this period is unsatisfactory and gives too little power to developing countries.

During the third wave of globalization, economic power is shifting away from the industrial countries for the first time in more than a century. The economies of the new globalizers are growing far more rapidly than those of the OECD economies: China and India are set to become major economic powers. Developing countries have a strong interest in the evolution of the global architecture because it curtails the imbalance of power. For example, the WTO offers weak countries their best prospect of forcing powerful countries to adhere to international rules rather than just doing whatever happens to suit them. It is the weak, not the strong, who are advantaged by rule-based systems of conduct.

Globalization and the domestic power of government

In some respects globalization restricts the choices open to a government. However, it is sometimes suggested that in order to succeed the new globalizers have only one choice—to model themselves on the pattern of limited government that characterizes the United States. The most obvious reason why successful globalization presents choices much greater than this is that many countries have already succeeded with a diversity of strategies. Consider two important dimensions of development: government expenditure as a share of GDP and the distribution of income. A number of highly open industrial economies have per capita incomes approximately equal to that of the United States. Among those countries with approximately the same living standards as the United States, five stand out as having radically more equal distributions of income: Austria, Belgium, Denmark, Japan, and Norway. All have Gini coefficients of around or below 0.25, contrasting with 0.41 in the United States. Like the United States, all these societies have provided an effective climate for private economic activity for a long time, but they differ in the role they assign to government. The share of GDP accounted for by central government expenditure ranges from 20 percent in the United States to 46 percent in Belgium, although the low U.S. share misses its large state-level expenditures that would bring its true figure to around 30 percent. The average share of government expenditure in GDP for low- and middle-income developing countries is only 20 percent. Hence, any of these six models of high-income success would involve governments expanding their size not only in absolute terms as GDP grows, but relative to GDP. The five high-income, high-equity societies do not constitute a common model. Nor can their markedly greater equity necessarily be attributed to

their higher share of public spending. However, they do illustrate that successful globalization does not require adoption of any single, standard institutional model.

Even within the EU, a group of countries far more integrated than will be achieved globally in the foreseeable future, wide variations in taxation and social policies co-exist without serious consequences. The main social effect of the EU has been the swift reduction in poverty in the poorest of its member countries.

Globalization is consistent with a wide range of choice in social policies, but it undoubtedly reduces choice in macroeconomic management. Because of capital market integration, most governments are less free to try to smooth the business cycle through fiscal and monetary expansion during downturns. An exception is the United States, because of its key currency role (its recent tax and interest rate cuts would have triggered a threat to the currency in most countries). However, this is a less drastic loss of power than it might seem. Many governments are now skeptical of their ability to fine-tune the business cycle irrespective of the problems introduced by capital market integration.

In some respects globalization empowers capital at the expense of government and workers. Capital can now move between countries, and a single location for production can serve many national markets. As a result, governments can find themselves competing against each other to attract the single plant that will serve the market for an entire region. Such competition is limited: tax policy is not usually a major influence on location. Governments that provide a good all-around climate for investment will not have to offer special tax concessions for most investments. The way to redress the balance of power is for governments within a region to agree on some floor to their own behavior. For example, Caribbean governments found themselves in competition with each other over attracting cruise ships to visit. The shipping companies did not want to pay charges for the environmental pollution that they caused and tried to play off each island against the others. In response the Caribbean governments were able to agree on and enforce a set of port charges for cruise ships. In such ways inter-government action can offset the power of capital.

In other respects, however, globalization weakens the power of capital. One way is through the intensification of competition. In a small national market there will often be a single dominant firm, and in such markets it is relatively easy to form cartels. As firms from other countries become credible competitors, the power of locally dominant

firms is reduced. We have noted the striking evidence for this in that the mark-ups that firms charge over cost have fallen. Even here globalization is not an unmitigated good: sometimes even at the global level an industry is dominated by a monopoly or a cartel. Currently, the regulation of monopolies and cartels is done at national level and so global market power is in a sense above scrutiny. The recent proposed takeover by the world's largest company, General Electric, of another large company, Honeywell, illustrates the current weakness of global governance, pitting a European regulatory authority against U.S. companies, and thus turning an issue of global regulation into a matter of rival national interests. However, the introduction of global regulation of monopolies and cartels would be politically difficult and not unambiguously beneficial for all developing countries.

A further way in which the power of capital has been reduced is through the globalization of information—"globalization from below." Companies are now far more vulnerable to international public opinion because people have learned how to harness their potential power as consumers. For example, the large company De Beers changed its policies in one market as a result of pressure from consumers in a different market. De Beers feared that there would be a diamond boycott in the United States, modeled on the fur boycott, and in response completely changed its policy toward purchasing diamonds in Africa. Nor is this power confined to the public of the industrial world. In Indonesia consumer pressure has proven effective in forcing companies to abide by local environmental standards. Again, this is not an unmitigated good. Consumers often make decisions based on very little information. Non-accountable non-governmental organizations (NGOs) can sometimes exploit this ignorance to pursue their own agendas at the expense of poor people. They threaten boycotts to enforce rich country standards that would prevent poor countries from breaking into global markets for manufactures, or shut peasants out of rich country markets for food. There is no prospect of such behavior being regulated: the only defense against abuse is to raise the level of understanding of how poor people can benefit from participating in the global economy.

Globalization and state failure

Interdependence through trade reduces international war. This is an old idea but it has been supported by quantitative research. Polachek

(1992, 1997) found that a doubling of trade between two countries reduces the risk of war and terrorism (see box 4.1) between them by 17 percent. However, the overwhelming majority of large-scale violent conflict is now due to civil war rather than international war, and the effects of globalization cannot be presumed to be benign.

During the third wave of globalization, developing countries have divided into two divergent groups in terms of economic performance. This

Box 4.1 Globalization and terrorism

THE INTERNATIONALIZATION OF TERRORISM IS AN instance of how global risks have outpaced global policy.

In the early 1970s there was a wave of terrorism that spread through imitation. As governments responded by protecting obvious targets, terrorists substituted bombing for hijacking, and civilian for military targets (Enders and Sanders, 2000). However, the main terrorist groups were national, such as Baader-Meinholf in Germany, Red Brigades in Italy, and Action Directe in France. Gradually, appropriate national counter-terrorist measures completely defeated them. Terrorism has used globalization to create two loopholes in these controls.

First, by spreading their organization across national boundaries, terrorists have made national-level, counter-terrorist activity less effective. Countering terrorism has become a global public good with all the attendant problems. Like other global public goods, it has been woefully under-provided. Governments have tolerated terrorists on their soil as long as their own citizens were not being targeted, and have failed to share information and coordinate efforts.

The second way in which terrorism has globalized to evade controls is to seek safe haven in the failed states that have mushroomed in recent decades—territory outside the control of any recognized government. The threat of military action is less effective against these governments: the state has already been destroyed.

The same counter-terrorist measures that defeated national terrorism will be needed to defeat international terrorism. But they will not work well unless they are conducted at a global rather than a national level. Before September 11th only four states had ratified the United Nations' convention against terrorism. To restore failed states to government, and to prevent other states from failing, will require developmental interventions. Economic decline is a major precursor to state failure, and conversely, economic progress helps to secure the state.

Because failed states can be safe havens for terrorists, economic development will be a core part of the long-term strategy to counter international terrorism. However, there is no facile connection between poverty and terrorism. Commonly, as with Baader-Meinhoff, terrorists are from wealthy and educated elites. Poor people are not the perpetrators of terrorism, but its victims. The attacks of September 11th have damaged the economic prospects for developing countries. On current forecasts in 2002 there will be around 10 million more people in poverty as a result of the attacks. Were the terrorism campaign to be sustained, its impact on poverty would be far greater—for example, an estimate of the cost of prolonged terrorism in the Basque region suggests that it has reduced income by 10 percent (Abadie and Gardeazabal, 2001). The 10 million additional people in poverty are among the unacknowledged and unidentified victims of international terrorism. Rich countries can offset these consequences through the policies of trade and aid discussed in Chapter 2.

same division applies to the more fundamental issue of violent civil conflict. It is exemplified by the differing experiences of Africa and the other developing regions. In 1970 Africa had a lower incidence of large-scale violent conflict than other developing regions. By the late 1990s Africa's incidence of conflict had risen, while that of the rest of the developing world had fallen sharply. Africa now has a much higher incidence of conflict than other developing regions.

These two diverging experiences are related: diverging economic structures are influencing the ability of the state to secure peace. New research shows that there are powerful risk factors that make marginalized countries more vulnerable to violent conflict. Collier and Hoeffler (2001) analyze all civil wars since 1960 to identify the characteristics that typically make conflict more likely.

First, the economic decline experienced by the marginalized countries is itself a major risk factor. They find that both the level of income and its rate of growth have important effects on the risk of conflict. Both low income and falling income increase the risks substantially. Since sustained economic decline results in low income, the poor growth experience of the less globalized developing countries over the past two decades has increased risk twice over. Conversely, among the globalizers the acceleration of growth and its resulting higher levels of income have considerably reduced the risk of conflict.

Second, the failure of the marginalized countries to diversify their exports into manufactured goods and services has increased their risk of conflict. Collier and Hoeffler find that, controlling for other factors, higher dependence on primary commodity exports increases the risk of conflict very substantially. There are various reasons why primary commodity exports might have this effect. By occupying the area in which primary commodities are produced, a rebel group can finance its activities through extortion. Sometimes the looting of primary commodities might even be a motivation for the rebellion. Additionally, governments get large revenues from taxing primary commodity exports and these revenues are often associated with poor governance, which in turn might induce rebellion. During third wave globalization, developing countries as a whole were able to diversify their exports massively: primary commodities as a share of their exports fell from about 75 percent in 1980 to around 20 percent by 1998. This substantially reduced the risk of conflict. But the marginalized countries did not share in this trend. Africa

actually increased its dependence on primary commodities. Collier and Hoeffler find that Africa's rising risk of conflict is fully accounted for by its deteriorating economic performance.

Not only are conflicts more likely to start, they are less likely to end: conflicts are tending to get longer (Collier, Hoeffler, and Soderböm 2001). A possible explanation for this is the growth of the global trade in small arms. Thirty years ago rebel groups needed to forge a political alliance with a foreign government in order to get access to arms; now they can arm themselves directly on the private market. Basic military equipment became radically cheaper as a result of the collapse of the Warsaw Pact. A recent report estimates that more than $30 billion worth of equipment has been unofficially sold from Ukraine alone.

Not only are conflicts less likely to end, but once ended, they are likely to restart: the typical post-conflict country has a 50 percent risk of going back into conflict within five years. As a result, once a country falls into conflict it tends to become trapped into long and repeated conflict. In turn, conflict makes it far more difficult to integrate into the global industrial economy. Too many countries have become trapped in a cycle of conflict, poverty, and dependence on primary commodities.

What can be done to break this cycle? At the global level two strategies are feasible and could be effective: better governance for key markets and enhanced aid for countries at risk of conflict.

The market on which most attention has been focused is that for diamonds. Some rebel groups have clearly financed their activities from the sale of alluvial diamonds. Since there are only a few centers for cutting diamonds and relatively limited channels of distribution, it is possible to regulate the diamond market in order to make it possible to sell conflict diamonds only at a deep discount. Both De Beers and the United Nations have been active in devising methods of market regulation. As with all such regulation, initial steps are easily evaded, but with persistence it should be possible gradually to separate conflict diamonds from the legitimate market. At the other extreme of regulation, the market for cocaine is also financing rebel groups. In Colombia rebel revenues are estimated at $500 million per year. The attempt to curtail consumption in rich countries by imposing penalties on production in poor countries has created a demand for territory outside the control of governments (Brito and Intriligator 1992). Rebel organizations gain control of territory and extract a rent for permission to produce cocaine.

A futher commodity where there is active international involvement is oil. In a few countries oil revenues do not even reach the government budget, but are siphoned off by corruption. Oil companies are beginning to adopt better practices of transparency so that civil society within countries can scrutinize what happens to oil income. NGOs such as Global Witness have shown that it is possible through a combination of corporate disclosure and public pressure to effect a major improvement in the governance of natural resources. Such alliances between NGOs, international corporations and the international financial institutions are part of the emerging informal global economic architecture.

In tandem with better global regulation OECD governments can reduce the risk of violent conflict in the high-risk developing countries by enhanced aid programs. As discussed in Chapter 2, aid is ineffective in some environments, but there are many low-income countries in which enhanced aid would raise growth and assist diversification away from dependence on primary commodities. Collier and Hoeffler (2000) simulate the effect of aid combined with economic policy reform in a poor, marginalized economy. Contrary to some suggestions, they find that neither aid nor policy reform are themselves direct risk factors. Both contribute to peace indirectly by raising growth and inducing diversification. In turn, growth and diversification reduce the risk of conflict. They find that over a period of five years the risk of conflict could be substantially reduced by aid combined with policy reform.

Globalization and culture

GLOBALIZATION CAN BOTH INCREASE AND REDUCE CULTURAL diversity. It increases diversity as foreign cultures are introduced by the power of communications and marketing, and by immigration. It reduces diversity if a foreign culture displaces local culture. Both these effects can be problematic.

Globalization increases diversity

Globalization increases social diversity as foreign cultures enter a society and co-exist with local culture. People become aware of different lifestyles through trade. For example, as Russia has opened its economy,

the Swedish retailer IKEA has introduced Scandinavian style to consumers in Moscow, but this has not driven out Russian style. People also become aware of different lifestyles through migration. In Britain, the chicken tikka introduced by South Asian immigrants has become the most popular fast food, but this has not driven out fish and chips.

Greater cultural and ethnic diversity can make a society more dynamic, but it can also create problems. In popular perception diverse societies find it harder to cooperate and are more prone to violent conflict. There is indeed evidence that within local communities—such as cities in the United States or school boards in Kenya—cooperation is more difficult if the community is multiethnic. Many relationships depend upon trust, and cultural diversity can make trust more difficult. Initially, research suggested that these adverse effects of diversity were sufficiently important to affect national economic performance (Easterly and Levine 1997). However, there are other effects of diversity that are advantageous for growth: a diverse society has a wider range of information and more dynamic business networks. Subsequent research has established that economic growth is not adversely affected by ethnic diversity as long as a country is democratic (Collier 2000, 2001). Diversity is generally detrimental only in the context of dictatorship: narrow, ethnically based dictatorships are inclined to sacrifice the common good of enhanced growth for their own group interest. Hence, the diversity of globalization goes hand-in-hand with the need for democratization.

Similarly, the expectation that diversity increases violent conflict is not borne out by research. Controlling for other characteristics, societies that are highly diverse in terms of ethnicity and religion actually have a lower risk of large-scale violent conflict than homogeneous societies (Collier and Hoeffler 2001). The risk of violent conflict is somewhat higher if the society has one ethnic group in a majority, facing minority groups, but even this effect is quite small relative to other risk factors such as poverty.

Globalization reduces diversity

Cultures differ, and the members of a culture have a strong interest in passing their own culture on to the next generation. For example, Bisin and Verdier (2000) describe the considerable efforts that ethnic minorities devote to the inter-generational transmission of culture. Globalization can

threaten this transmission, exposing youth to different cultures through the spread of ideas, goods and advertising, and through the movement of peoples. However, Bisin and Verdier find that cultures are remarkably resilient. Cultural transmission can withstand diversity, co-existing with other cultures in the same society. Obviously, what it cannot withstand is a situation in which imported culture is so powerful as to displace local culture. There are well-based fears that globalization will weaken the inter-generational transmission of culture as a result of displacement effects.

The most likely displacement effects may be for local culture to be displaced by western culture, and in particular by American culture. American films and brands have a large presence in the world economy. Both developing and developed countries see a danger of cultural homogenization and consequent loss of identity. The perception of the danger is real and strongly felt. Some countries subsidize their film and culture industries, which is permitted under WTO exceptions for products with a high cultural content. But there is no simple answer to this concern, and it is clearly a factor in countries' decision-making concerning integration with the global economy.

Globalization and the environment

Globalization and pollution

In previous chapters we have suggested that globalization raises incomes in most of the world and intensifies competition. The higher consumption that this enables poses a potential threat of environmental pollution. The intensification of competition also creates a potential for a "race to the bottom" and "pollution havens." Governments may try to attain a competitive advantage by lowering their environmental standards: the beggar-thy-neighbor problem of protectionism may be replaced by a beggar-thyself problem of globalization. Offsetting these effects, as incomes rise through globalization, people can afford to give greater priority to environmental quality. The net effect is likely to differ between countries. Some of the poorest countries may opt to become pollution havens. The new globalizers, where industrialization is most rapid but incomes are still low, may face environmental deterioration. The rich countries may opt to improve their environments. We now consider some of the evidence for these effects.

First, consider the ambiguous net effect of rising income. Some research has suggested that there is an environmental "Kuznets curve"—development initially worsens the environment, but eventually improves it again. If so, this implies both that development threatens the environment and that something can be done—and usually is done—to rectify it. There are quite good theoretical reasons to expect such a relationship, but the empirical evidence for it is mixed. The theoretical underpinnings cover political economy, technology, and economics. As incomes rise, concern for the environment increases and this induces a policy response that improves the environment (Grossman 1995). If pollution abatement technology exhibits increasing returns to scale, growth of the economy makes such technologies more accessible (Andreoni and Levinson 1998). For those natural resources that are traded, scarcity will itself inhibit degradation (Unruh and Moomaw 1998), while structural change in the economy favors service sectors that are less polluting than industry (Syrquin 1989). The empirical evidence is contested. A recent survey concludes that there is no evidence for a Kuznets curve *in general* (Borghesi 1999). However, for particular aspects of the environment the evidence is sometimes stronger. For air quality there is a strong Kuznets curve, although the actual turning point at which quality starts to improve is unclear (Cole, Rayner, and Bates 1997; Harbaugh, Levinson, and Wilson 2000). On water quality there is also some evidence for a Kuznets effect. For most other environmental indicators there is no such evidence. Even where there is an apparent Kuznets effect, most of the evidence comes from cross-section analysis of countries. What might be happening is that there are two separate processes going on simultaneously: environmental deterioration in developing countries and environmental improvement in rich countries, rather than these being two observations on a single trajectory. The evidence is more difficult to interpret because there are so few middle-income countries at what might be the turning point. Studies of countries that might be expected to be around the turning point find no evidence for it. For example, a study of Malaysia finds only continuing environmental degradation (Vincent 1997).

The evidence certainly does not support the complacent notion that environmental degradation is simply a temporary phase that can be easily reversed. On the contrary, degradation tends to accumulate over time and can become much more costly to reverse; indeed, if the costs of abatement become too high, environmental degradation becomes in an economic sense irreversible. Hence, a development policy that puts a

priority on growth at the expense of the environment may be shortsighted, incurring avoidably high future costs.

Now consider the effect of intensifying competition. Environmental pollution can be limited through effective regulation. In turn, effective regulation requires effective state action: regulations must be devised and enforced by public agencies. Regulation is thus both a political and a bureaucratic process. Potentially, the intensification of competition can interfere with it as governments seek a competitive advantage for their country by imposing lower standards than other countries. This could show up both as a general race to lower standards and as pollution havens—the countries with the fewest other locational advantages aggressively abandoning all standards.

While there is no dispute that in theory intensified competition could give rise to pollution havens, the empirical evidence suggests that it has not happened on a significant scale. The main reason is that the costs imposed by environmental regulation are small relative to other considerations, and so their impact upon location decisions between rich and poor countries is minimal. As discussed in Chapter 1, there are large cost differences between locations due to factors such as transport, infrastructure and economic policy. By contrast, the cost of making a plant less polluting is usually remarkably cheap.

During third wave globalization, the new globalizers have indeed increased their share of global industrial production. This has increased their share of pollution intensive industries (Mani and Wheeler 1998). However, this increased production of pollution-intensive goods was not related to exporting: it largely met domestic demand. Developing countries harnessed their comparative advantage in *labor*-intensive industries, not in *pollution*-intensive industries. They have not increased their share of global pollution-intensive industrial exports. Indeed, their exports to rich countries are less pollution-intensive than their imports. The rich countries have actually strengthened their comparative advantage in pollution-intensive industries despite stricter environmental standards (Sorsa 1994; Mani and Wheeler 1998; Albrecht 1998). As we will see, developing countries do face severe problems of industrial pollution, but not as a result of pollution haven effects. Indeed, foreign-owned plants in developing countries, precisely the ones that according to the theory would be most attracted by low standards, tend to be less polluting than indigenous plants in the same industry. Most multinational companies adopt near-uniform standards globally, often well above the

local government-set standards (Dowell, Hart, and Yeung 2000; Schot and Fischer 1993). This suggests that they relocate plants to developing countries for reasons other than low environmental standards. Paradoxically, the pollution haven effect may be more important within the national boundaries of a developed country than between rich and poor countries. Within a national boundary many of the other locational factors are less important, and so local environmental regulations might matter more. For example, there is evidence that regulations do affect locational decisions within the United States (Becker and Henderson 1997; Henderson 1996).

Similarly, there is little evidence for a race to the bottom—a competitive lowering of standards. New theoretical research suggests that this would manifest itself most strongly in the new globalizing economies (Chau and Kanbur 2001). However, two empirical studies do not find that countries have lowered their standards to attract foreign investment or to increase exports (Wheeler 2001; Jaffe and others 1995). Wheeler analyzes data on air quality in the industrial heartlands of three major new globalizing countries: Brazil, China, and Mexico. He finds that far from experiencing a race to the bottom, all three have registered improvements in air quality.

However, developing countries—both the more globalized and less globalized areas—do face major problems in developing effective environmental regulation. For example, a recent study of China shows that current environmental regulations are *far* weaker than would be justified if the social costs of abatement were properly balanced against the social benefits (Wang and Wheeler 1996). Such regulation requires both political and bureaucratic action. In many countries business lobbies can oppose the tightening of standards on the spurious grounds that this would impair their competitiveness. This process, known as "regulatory chill," is much more plausible than a competitive lowering of standards. The new globalizers need to raise their regulatory standards quickly as they rapidly industrialize, and this sort of lobbying can slow the process down. In addition to regulatory chill—which affects the political process—satisfactory environmental standards are impaired by weak bureaucracies. Some states have only limited capability for effective bureaucratic action. They lack the necessary revenue and skill base. Failing states will have poor enforcement of environmental standards regardless of their regulations. They are most unlikely to become international havens for polluting industries because virtually all industry

needs supporting services that failing states cannot provide. However, local industry will be far more environmentally damaging than would be socially desirable. Where pollution has become particularly serious it sometimes provokes effective popular pressure. For example, in the Mexican city of Ciudad Guars smoke emissions from small brick kilns provoked widespread public pressure that induced politicians to act. In Indonesia environmental standards are effectively enforced by the simple strategy of grading firms according to their compliance and publicizing the results. More generally, the effectiveness of pollution control depends on the combination of a bureaucratic capability to measure pollutants and a political capability to act on the information. Democratic and participatory arrangements make it more likely that information will be used and can also make it more likely that it is collected. Countries differ markedly in the receptivity of the political process to the concerns of ordinary people, and this, rather than an environmental Kuznets curve, may account for the differing environmental paths. Many countries are simply not implementing pollution abatement measures that are readily available, cheap, and effective.

Globalization and deforestation

Official figures from the U.N. Food and Agriculture Organization (FAO) suggest that tropical regions are experiencing deforestation at a rate of about 0.7 percent per year and that this is accelerating. Such severe deforestation has several adverse consequences: the loss of a sustainable supply of forest products, hydrological impacts such as flooding, reduced biodiversity, and an increase in net greenhouse gas emissions.

Models of deforestation find that both growth and economic liberalization can accelerate deforestation (Angelsen and Kaimowitz 1999). Growth is associated with the encroachment of agriculture, and liberalization is associated with commercial logging, the two main causes of deforestation. However, establishing the effect of development on forest cover poses similar problems to its effect on environmental pollution. The global time series data are doubtful: for example, the FAO uses a model to estimate forest loss in which it is assumed that increased population density causes deforestation (Rudel and Roper 1997). However, the anthropological evidence challenges precisely this relationship. In a study of long term environmental change in Machakos, Kenya, Tiffen (1993) found

that increased population density had actually reduced environmental degradation as open access resources were transformed into rule-managed regimes. Fairhead and Leach (1998) find a similar pattern in six West African countries. They conclude that official estimates of deforestation for these countries during the 20th century are between three and five times too high. Just because a natural resource becomes more valuable does not necessarily imply that it will become exploited in an unsustainable fashion. The response of Machakos farmers is an instance of a general phenomenon, the incentive to create regulated management.

While the extent of the global problem is thus contested, there are undeniably high rates of deforestation in some countries. Currently, the highest annual rates of tropical deforestation appear to be in the Philippines (3.5 percent), Sierra Leone (3 percent), and Thailand (2.6 percent). These disturbingly high rates may not be the direct result of the global market, but rather a particular interaction between it and local institutions. Ross (2001) provides an insightful analysis of deforestation in Thailand, one of the new globalizers. He shows how, as timber became more valuable, state officials themselves actively undermined the institutions that had been effectively regulating the industry. By undermining the institutions they were able to create opportunities for corruption—a process he terms "rent seizing." While in Thailand the dismantling of forestry regulation occurred in the context of overall development, deforestation in Sierra Leone occurred in a context of generalized state failure. As discussed above, this failure was in part attributable to the unregulated extraction of diamonds by rebel groups. Both cases suggest that local institutions can be undermined by the presence of valuable natural resources, although the effect is not inevitable: local actors also have an incentive to build institutions to regulate valuable resources, and the effect of international trade itself may be quite modest.

Although trade flows in tropical timber are relatively small (see box 4.2), there have been proposals to impose quotas or bans to counteract deforestation (see box 4.3). However, such efforts are unlikely to be successful unless they are part of an international mechanism by which countries are compensated for maintaining forests' global services for biodiversity and carbon sequestration. Domestic improvement of institutions is more likely to be effective where most production is for the domestic market, where the problems associated with deforestation are domestic, and where the policy failures are also domestic.

Box 4.2 Trade in tropical timber

A CLOSER LOOK AT THE INTERNATIONAL MARKET in tropical timber (industrial roundwood, sawnwood, wood-based panels, woodpulp, and paper products) shows that both export and import markets are largely dominated by developed countries. The principal exporters of forest products are North America and Western Europe, which in 1996 exported 35 percent and 39 percent of the world's industrial forest products, respectively (FAO 1999). The export share of developing countries varies considerably across commodity groups, with focus on industrial roundwood and wood-based panels (FAO 1999). Developing countries' share of total imports is the same as their export share, and relatively minor, with 22 percent of total world imports in 1996 (FAO 1999). As regards exports as a share of total production in 1996, developing countries exported 7 percent of their roundwood, 10 percent of sawnwood, and 39 percent of wood-based panels. The rest was consumed locally (FAO 1999).

The relatively small share of tropical timber in international trade flows prompted Sedja and Simpson's (1999) result that further trade liberalization in wood products would have only very modest impact on deforestation. Panday and Wheeler (2000) analyze the effect of structural adjustment policies on wood products in 112 developing countries from 1961 to 1998. They find that although adjustment had strong impacts on imports, exports, production, and consumption of wood products, the net impact on domestic roundwood production (as a proxy for forest exploitation) has been close to zero. However, if trade liberalization leads to higher prices for tropical timber, deforestation may increase as logging becomes more profitable (Von Amsberg 1994, Barbier and others 1995, Deacon 1995). Furthermore, there is also an indirect effect of timber logging, apart from the removal of trees and other damage incurred to surrounding forest during timber extraction. Opening up and improving access to the forests facilitates agricultural conversion and fuelwood collection. Thus, the total effect of timber logging is likely to be understated by the contribution of wood extraction to deforestation. For the Philippines, Boyd, Hyde, and Krotilla (1991) find that tariff reduction for timber products would exacerbate deforestation. However, the main reasons are policy failures in the forestry sector and poor timber management.

Environmental regulation thus requires substantially more effort and resources than simple, targeted control of a few pollutants. Whether regulatory development can keep pace with economic development depends on whether environmental regulatory institutions can develop faster than public institutions more generally. The evidence is sparse, but the World Bank's own indicators of institutional and policy development provide some grounds for optimism (Wheeler 2000). Even general policy indicators are not closely correlated with economic development; they exhibit great variation at each income level. Further, environmental policy is sometimes far in advance of general policy, for example, in Belize, Bhutan, Ecuador, the Maldives, and the Seychelles. These are all countries where specific natural resources are important determinants of

Box 4.3 The use of trade instruments to address environmental issues is not the best sustainable approach

ALTHOUGH TRADE FLOWS IN TROPICAL TIMBER trade are small, and timber extraction is not a major source of deforestation, trade restrictions on timber have been proposed to address the global environmental aspects of deforestation. Such restrictions would be imposed on resource-based commodities exported by countries hosting threatened biodiversity, and imported by countries that are recipients of global biodiversity benefits. The Convention on International Trade in Endangered Species (CITES) is an example of an international agreement in the form of a ban on trade in selective endangered species, including some timber. Proposals for further trade bans in tropical timber have been advanced by timber-importing countries. Local governments in Germany and the Netherlands have implemented bans on the use of tropical timber. Product labeling has been implemented in Austria. The Netherlands has adopted a policy of importing only sustainably managed tropical timber since 1995 (Barbier and others 1994; Government of the Netherlands 1991). And the EU Parliament has brought forward a proposal to impose annual quotas on imports of tropical hardwood (Dean 1995).

The existing CITES ban is controversial, both politically and conceptually. Bulte and Kooten (1999) conclude that it arrested the decline of the African elephant population, and that continued trade and poaching could have driven the species to extinction. However, some African countries are now hosting growing elephant herds and criticize the convention because it prevents them from benefiting from their sustainable population management by exporting ivory.

Many experts (Barbier and others 1994; Swanson 1995) disapprove of trade bans like CITES: they are difficult to enforce (especially over the long run), create huge profits from illegal trade, and provide little incentive for host countries to implement sustainable resource management. There are similar reservations regarding a ban on tropical timber.

tourist revenue. In such cases even countries with low overall policy ratings have proven capable of focused efforts to protect critical environmental assets (Wheeler 2000). This reinforces the conclusion that even poorly administered societies can strengthen regulation when environmental damage is clear, costly, and concentrated in a few sites.

Global warming and other transnational environmental problems

In general, environmental problems (whether pollution or illegal trade in biodiversity) become harder to control when their effects are widespread and cross jurisdictional boundaries. Local public goods can often be regulated effectively by policymakers in individual countries. Regional and global public goods often require international coordination and

treaties. Already, more than 200 multilateral environmental agreements (MEAs) have been concluded. The result is a form of environmental globalization—a growing international structure for environmental management reflecting the diversity of the issues and interests involved. Few of these MEAs regulate trade or contain trade provisions. Box 4.4 summarizes those that are of significance to the relationship between the environment and trade.

In general, trade restrictions are not the best option to protect the environment. Measures should be designed to affect the primary source of the problem in production, consumption, or waste disposal, regardless of whether the product is internationally traded. When one country's production or consumption decisions impose environmental

Box 4.4 Multilateral environmental agreements with trade provisions

CONVENTION ON INTERNATIONAL TRADE IN **Endangered Species (CITES).** Bans commercial international trade in an agreed list of endangered species. It also regulates and monitors (by use of permits, quotas, and other restrictive measures) trade in other species that might become endangered.

Montreal Protocol on Substances that Deplete the Stratospheric Ozone Layer. Lists certain substances as ozone depleting and bans all trade in those substances between parties and non-parties. Similar bans may be implemented against parties as part of the protocol's non-compliance procedure. The protocol also contemplates allowing import bans on products made with, but not containing, ozone-depleting substances—a ban based on process and production methods.

Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and Their Disposal. Allows parties only to export a hazardous waste to another party that has not banned its import and that consents to the import in writing. Parties may not import from or export to a non-party. They are also obliged to prevent the import or export of hazardous wastes if they have reason to believe that the wastes will not be treated in an environmentally sound manner at their destination.

Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (PIC). From the convention's agreed list of chemicals and pesticides, parties can decide which ones they cannot manage safely and, therefore, will not import. When trade in the controlled substances does take place, labeling and information requirements must be followed. Decisions made by the parties must be trade neutral: if a party decides not to consent to imports of a specific chemical, it must also stop domestic production of the chemical for domestic use, as well as imports from any non-party.

Cartagena Protocol on Biosafety. Restricts import of some living genetically modified organisms as part of a carefully specified risk management procedure, as parties determine. Living GMOs that will be intentionally released to the environment are subject to an advance informed agreement procedure, and those destined for use as food, feed, or processing must be accompanied by documents identifying them.

externalities on other countries, such as acid rain, global warming, and biodiversity destruction, MEAs should be established to tax the unwanted emissions or fund the installation of appropriate technology or institutions. Only if this approach is not feasible may there be a theoretical case for using trade policy. Markusen (1975) and Baumol and Oates (1975, 1988) demonstrated that, in the case of transboundary pollution, a tariff on a polluting good could improve welfare. Further, tariffs may discipline countries to join and abide by MEAs. Even when some countries causing the environmental problem do not join an MEA, tariffs could avoid an undermining of the agreement through so called "pollution leakage." However, such tariffs would have to be well crafted since a large body of evidence shows that developing country factories exhibit great diversity in environmental performance (Wheeler and others 1999). It would therefore be inefficient and counterproductive to impose tariffs equally on exports from all firms. A further problem with tariffs for environmental purposes is that they could be challenged under GATT/WTO regulations (see box 4.5). The potential conflict between multilateral trade rules and multilateral environmental protection is one of the most contentious issues between environmental activists and those favoring trade liberalization.

However, to force developing countries to adopt OECD-quality environmental standards through trade threats would be an abuse of power by the industrial countries. Tariffs would be a form of taxation on poor countries—aid in reverse. If rich countries want higher standards than poor countries would themselves choose, they should induce poor countries to adopt higher standards through positive incentives rather than coercion.

The case of ozone-depleting chemicals demonstrates that the international community can control transboundary pollution effectively when the damage is obvious and widespread, and financial resources are made available to finance pollution abatement by poorer countries. Effective control of chlorofluorocarbons (CFCs) under the Montreal Protocol (see box 4.4) has been greatly aided by the relative concentration of major CFC sources, the willingness of OECD governments to subsidize rapid conversion, and the availability of substitutes. Similar factors have promoted effective international action to remove lead from gasoline.

In more diffuse, long-run cases such as persistent organic pollutants (POPs) and greenhouse gases, however, the international community has not mobilized as effectively. International negotiations for POPs phaseout have begun, because developing country governments perceive clear risks

Box 4.5 The World Trade Organization and multilateral environmental agreements

DO GATT/WTO RULES PREVENT ENVIRONMENTAL protection? This question is one of the key issues in the relationship between trade and environment.

According to its charter, the WTO strives for "the optimal use of the world's resources in accordance with the objective of sustainable development," and says that "members do not want to intervene in national or international environmental policies." Environmental advocacy groups have a different view. Greenpeace argues that the "application of the WTO rules is interfering with the ability of governments to respond to citizen demands for protection against threats to environment and health." And they conclude that "WTO policies fail to acknowledge that the…ecosystem imposed fixed limits on the amount of resources human beings can consume…without creating…an ecological catastrophe." At the heart of the debate is the potential conflict of trade measures in MEAs and GATT/WTO rules.

WTO and MEAs: So far, no dispute has arisen between WTO rules and trade measures in MEAs. However, several of the trade measures could potentially lead to violations of the central GATT/WTO rule of non-discrimination between members. If a GATT/WTO member follows rules of an MEA to which it is party and applies trade restrictions against another GATT/WTO member that is not party to the MEA, but not against those GATT/WTO members who have signed the MEA, the rule of non-discrimination would be violated.

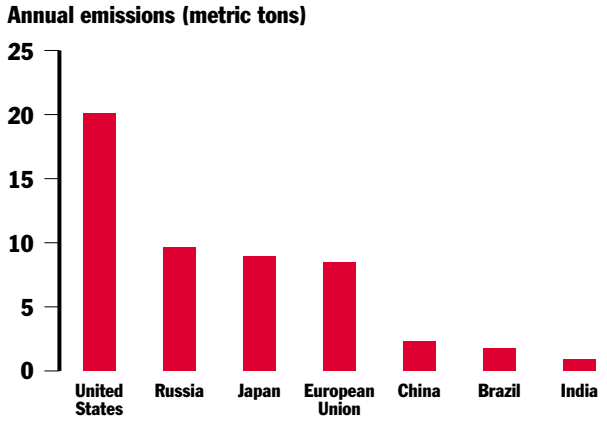
The WTO recognizes the potential conflict, but takes the view that problems are unlikely to arise. In the event of a conflict, the WTO considers its dispute settlement provisions satisfactory to tackle any problem.

Environmental NGOs, however, fear that in case of a clash free trade may prevail over environmental protection. The World Wildlife Fund thus advocates a reform of the WTO to "fully respect the authority and rules of international conservation and environmental agreements" and to "clearly recognize the limits of its jurisdiction over environmental questions." Greenpeace similarly demands that the WTO "ensure that its rules and decisions support rather than interfere with the objectives and effective implementation of MEAs."

for their own populations (Thornton 2000). As regards efforts to control greenhouse gases, a number of factors have so far prevented effective abatement. Environmental damage will accrue mostly in poor countries, is uncertain, and probably will take place well in the future. At the same time, the costs of reducing greenhouse gases will fall mainly on rich countries, are high, and must be paid now. If one looks at the seven largest emitters (accounting for 70 percent of CO_2 emissions) there are large differences in per capita emissions in rich countries such as the United States compared to poor countries such as India (figure 4.1).

The Kyoto protocol approach to greenhouse gasses is for rich countries to set themselves targets for emissions reduction, which is a positive step. The Global Commons Institute, an NGO, has come up with an innova-

Figure 4.1 Per capita CO_2 emissions in the E-7 economies, 1998



Source: Kraus and Shalizi (2001).

tive proposal that could extend participation in emissions reduction beyond the present signatories. The proposal entails agreeing on a target level of emissions by the year 2015 and then allocating these emissions to everyone in the world proportionally. Rich countries would get allocations well below their current level of emissions, while poor countries would get allocations well above. There would then be a market for emission permits. Poor countries could earn income selling some of their permits; rich and poor countries alike would have strong incentives to put energy-saving policies into place; and private industry would have strong incentives to invent new, cleaner technologies.

Similar international cooperative action has been favored by experts in view of the global environmental services from forests, both for preserving biodiversity and for carbon sequestration. Any agreement would have to find a mechanism to internalize positive externalities by paying for global forest services (Nordstroem and Vaughan 1999; Barbier 2000). This could be done either by relying on new markets for environmental services, such as joint implementation, bioprospecting deals, debt-for-nature swaps, or by establishing a global environmental organization that would ensure that host countries receive international compensation for additional conservation efforts that protect or provide global environmental benefits (Barbier 2000). So far, however, the convention on biological diversity and the international forest agreement have not received full international support.

Summary of recommendations

One of the distinctive features of the third wave of globalization is that the importance of developing countries in the world economy is growing. As this process occurs, it will be natural and desirable for this growing presence to be reflected in the power relations within international institutions such as the WTO, U.N. Security Council, World Bank, and IMF. The situation of each of these institutions is different, but the general point is that an increasing amount of economic interaction will be taking place outside of the OECD, so it is important that the new players in the world economy have substantial say in the architecture governing these interactions.

Globalization does limit the independence of national governments in some dimensions, but governments have many degrees of freedom to manage the interaction between trade, capital, and labor flows, on the one hand, and national culture and environment, on the other. Trade in cultural products should retain the special exemptions that they have within WTO rules. Many countries subsidize cultural products and cultural preservation in different ways, and globalization is consistent with the maintenance of a vibrant culture.

Similarly, many countries and communities are improving environmental conditions as globalization proceeds. Make no mistake: rapid industrialization in the new globalizers will increase pollution unless checked by improved regulation. There is great variation in environmental conditions in developing and developed countries, including among successful globalizers. Thus, it is possible to protect the environment through local collective action, but many locations are not doing it.

Global warming requires international collective action. There are many ways of achieving effective restraint. The Kyoto protocol approach is for rich countries to set themselves targets for emissions reductions, and the recent agreement between European nations and Japan to move ahead with the protocol is a positive step forward. Looking further down the road, it is critically important to get at least all of the E-7 involved. The Global Commons Institute, an NGO, has come up with an innovative proposal for how to do this. The proposal entails agreeing on a target level of emissions by the year 2015 and then allocating these emissions to everyone in the world proportionally. Rich countries would get allocations well below their current level of emissions, while poor countries would get allocations well above. There would then be a market for

emission permits. Poor countries could earn income selling some of their permits; rich and poor countries alike would have strong incentives to put energy-saving policies into place; and private industry would have strong incentives to invent new, cleaner technologies. One of the hopeful things about globalization is how an innovative idea like this can quickly gain currency and support.