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CLEANING UP THE KYOTO PROTOCOL **Emission permit trading would let developing nations reap profits from green policies**

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Scientists overwhelmingly agree that if world emission rates continue on their current trajectory, carbon dioxide and other greenhouse gases will significantly raise global temperatures and alter the climate during the next century. In December 1997, the industrialized nations met in Japan and ratified the Kyoto Protocol, an agreement to reduce the emission of greenhouse gases in order to slow the process of climatic change. Currently, the Kyoto Protocol does not call on still-developing countries to accept binding emission targets, primarily because developed countries are responsible for the vast majority of current greenhouse emission and atmospheric concentrations and because developing countries, for obvious economic reasons, are least able to combat emissions. Some U.S. businesses and politicians, however, are worried that binding carbon targets will impose unfair costs on developed economies, giving an advantage to those companies located in the developing world and offering incentives for U.S. firms to relocate abroad.

In order to incorporate the developing nations in the Kyoto Protocol, the Clinton Administration pushed for the inclusion of the Clean Development Mechanism (CDM). Under the CDM, nations in the developed world would be subject to caps on greenhouse gas emissions while developing nations would not. Developed nations would be allowed to exceed their caps as long as they found ways to reduce emissions by an equal amount in developing nations. Such a system (which will be examined in more detail later in this paper) would attempt to track emission rates on a project-by-project basis rather than on a national basis. But a worthwhile emissions agreement would strive to put developing countries on a more environmentally friendly development path while helping developed countries meet their agreed-upon emission targets. Unfortunately, the CDM system is inherently flawed in this regard. This paper suggests a better mechanism for incorporating the developing nations into the carbon reduction effort.

The exploding trade deficit and emission caps

As a result of the financial crisis in East Asia, the United States faces the prospect of a rapidly growing trade deficit. In excess of 1 million manufacturing jobs may be lost due to the growing imbalance. This will be bad news not only for the workers directly affected, but also for tens of millions of other workers who will experience downward wage pressure as a result of the massive displacement of manufacturing workers.

This situation came about because of the conditions imposed on East Asian economies by the International Monetary Fund (IMF), which designed bailout packages that encourage these countries to export their way back to economic health. A huge decline in the value of the currencies of the region has made their exports very cheap. Restrictive labor laws will keep wages from rising and preserve the cost advantage of the region's exports. The IMF has also insisted on large cutbacks in government spending, which has led to reductions in food subsidies and other forms of social welfare spending. This means that the export boom needed to satisfy IMF targets is not likely to do much to benefit most of the population of East Asia.

The current shape of the global economy provides developing nations with few alternatives to the path of export-led growth. Under current conditions, these countries are able to get the capital they need to sustain their development only through exports produced with cheap labor.

The effort to restrict greenhouse gas emissions can provide an alternative support for growth in developing nations. This can be accomplished quite simply. In the first phase of a climate agreement, the developing nations can be given emission caps based on simple projections of current emissions growth rates, assuming little or no reduction off this rate. Later phases would gradually set caps that reduce growth off this trend, with the target being an eventual convergence of per capita emissions in all nations. The initial emissions caps — say for the first 20 years — will not by themselves directly lower emissions in developing nations. But an additional incentive could be thrown into the mix: insofar as the developing nations reduced their emissions below their assigned cap, they would be able to sell permits for the right to emit greenhouse gases to other nations who want to exceed their own caps. In this way developing nations could earn tens of billions of dollars each year by finding ways to reduce their emissions of greenhouse gases. Instead of imposing an obstacle to development, this system could provide the financing that developing nations need to support their development. In short, the permits that developing nations will be granted under this system can provide them with an alternative to export-led growth.

For example, Mexico presently emits approximately 110 million tons of carbon-equivalent gas; it is projected to emit 220 million tons a year by 2020 if it follows its current trajectory. If Mexico were assigned caps matching this projected growth in emissions, with the option of selling emissions permits if it undercut its annual limit, then Mexico would be in a situation in which it could only gain. If Mexico were able to reduce its emissions by just 10% below its cap, it would have 22 million tons of emission permits to sell in 2020. What would this mean in actual revenue? There is a huge range of estimates as to the price that these permits will command, but credible projections put the price at about \$60 per ton (in 1999 dollars). At this price, Mexico would be able to earn \$1.2 billion a year, equal to approximately 0.5% of its GDP (or the equivalent of roughly \$40 billion for the U.S. economy).

Earnings of this magnitude will not be sufficient to fully finance Mexico's needs for capital, but they will provide a substantial boost. Furthermore, the system sets a path on which earnings can be increased by further reductions in emissions. For example, if Mexico is able to reduce its emissions by 25% below its targets, a

realistic goal, then it would be able to earn \$3 billion a year (the equivalent of \$96 billion to the U.S. economy), an amount that would go far toward supporting Mexico's development. In addition, as soon as it became clear that countries would have permits to sell, they could then borrow against this future source of revenue on international financial markets. The incentive to begin reducing emissions would thus be felt immediately, and additional money to finance development could start flowing soon thereafter.

Getting developing nations to sign on to a global agreement of this sort is an important step in reducing emissions worldwide. In fact, it will be possible to reduce emissions most easily in developing nations, since the adoption of relatively simple energy efficiency measures can have a huge impact. Also, more advanced alternatives like solar and other clean technologies may actually be more competitive in developing than in the industrialized nations, since many developing countries do not already have a fully established electric power grid. The sooner that developing nations are brought under the agreement, the easier it will be for them to pursue a long-run clean development path. This system would only bolster the fight against global warming, since emissions have the same impact regardless of their source.

Signing on to emissions caps under these conditions should be extremely attractive for Mexico and other developing countries. By agreeing to caps, these nations will have the opportunity to pursue an alternative path to development. Instead of trying to earn foreign exchange by having the lowest cost labor in factories, they can do so by cleaning up the environment, which would be a far healthier path to development.

Workers in the United States would also gain in this scenario. The developing nations would have billions of dollars with which to purchase U.S. exports of capital goods and clean technology products. Also, insofar as the selling of permits can push developing nations onto an alternative development path, it would alleviate the pressure from low-cost imports that has depressed the wages of non-college-educated workers in advanced countries and has been an important factor in the growth of wage inequality. Furthermore, the opportunity to purchase emissions permits from developing countries will reduce the cost of meeting the emissions targets the U.S. agreed to in the Kyoto Protocol.

In short, by getting developing countries on board in this manner, this plan will create a situation in which we can be assured that worldwide targets for emissions reductions can be met. Furthermore, it will provide a far better development path for these nations than the one they are currently pursuing. This plan also will have the effect of increasing demand for U.S. manufactured goods, helping to improve the situation of the bottom three-quarters of the U.S. workforce who have been the losers in the "new economy."

Having developing nations agree to caps with a system of tradable permits ensures that low cost emissions reductions in these nations will be achieved at the earliest possible date. In the longer term, national caps can be adjusted to allow a convergence between historic emissions patterns and an equal per capita distribution of greenhouse gas emissions. Such an adjustment would gradually increase the portion of the permits going to developing nations and decrease the portion going to the developed world, including the United States. This shift would not actually require greater reductions in emissions in the United States; rather, the United States would simply have to buy a larger portion of its emission permits, instead of being endowed with them by an international body. Since permits are tradable, and in that way a form of wealth, any alternative mechanism would imply that the world should give nations money in proportion to the amount that they had been polluting in previous years. This would be an enormous transfer of wealth from the poorest nations to the richest, and it is unlikely that

the developing nations would agree to such a massive commitment of foreign aid to the United States, Europe, and other industrialized regions of the world.

The problem with the Clean Development Mechanism

It is worth contrasting this plan with the Clean Development Mechanism being pushed by the Clinton Administration. Under the CDM, developing nations are not subject to any overall cap. However, they will be able to basically sell permits to the U.S. as a result of specific projects that are supposed to reduce emissions. For example, if a U.S. firm buys an old, inefficient steel factory in India, shuts it down, and replaces it with a less-polluting factory, the U.S. firm can claim credit for the reduction in emissions and sell these credits in the U.S. or other industrialized countries. Alternatively, if a U.S. firm buys agricultural land and plants a forest, the carbon dioxide pulled out of the atmosphere by the forest can also earn emissions credits that can be sold internationally.

The most important problem with this system is that there is no way of determining when real reductions in emissions are actually occurring as a result of such projects. In the case of the steel factory, it is possible that an old steel factory would have been shut down, even without the incentive of obtaining emission permits. And in the case of reforestation, while the new forest may withdraw greenhouse gases from the atmosphere, the displaced farmers might just cut down trees elsewhere, leading to no net greenhouse gas reductions. Under this arrangement, then, emissions credits will be given even if there is no real worldwide reduction in emissions. In a situation in which emissions are examined project-by-project, it is difficult, if not impossible to determine when real reductions are occurring. The fact that this process would generate valuable permits at a low cost provides a powerful incentive for multinational corporations to search out false opportunities like this throughout the developing world.

The CDM can also have a negative impact on the U.S. trade balance. The price of energy in the U.S. will rise somewhat as a result of emissions restriction, providing an additional incentive for industry to move into developing nations where the restrictions do not apply. The CDM may, in many cases, provide an additional bonus to corporations: if a U.S. company buys an antiquated steel factory in Mexico and shuts it down, the company will have emissions permits that it can sell to support the construction of a new steel factory in Mexico. This will lead to a further loss of U.S. manufacturing jobs. It is also likely that such actions will actually lead to increased emissions, since facilities in developing nations are likely to emit more than factories in the industrialized nations, and shipping materials between countries will require substantial additional use of energy.

By contrast, if the developing nations are actually subject to caps, exploiting the system in this manner will be impossible. While the true increase or reduction in emissions from a specific project may be difficult to measure, emissions from a nation as a whole can be monitored more accurately and could be administered by the same mechanism used for developed countries. If a country failed to adopt an effective system of reducing emissions, it would not have any permits to sell, and it would lose a huge potential source of capital. Developing nations will be able to get permits only as a result of real reductions in emissions.

Furthermore, getting the developing nations under the caps would have the effect of raising the price of energy in these nations, much as in the industrialized nations, thereby reducing incentives to shift production to developing countries to take advantage of lower energy prices. As noted earlier, such shifts would hurt workers in

the United States without producing any gains for the environment at all. From the standpoint of both the environment and workers in the United States, having the developing nations subject to caps will be far better than the CDM.

But the most important problem with the CDM may be the long-term incentive structure it puts in place. Under the CDM, capital can begin flowing to developing countries (or more correctly, to wealthy corporations within developing countries), regardless of whether or not real emissions reductions are occurring. With an ongoing flow of revenue from CDM projects, which may or may not actually reduce emissions, developing nations will have little incentive to agree to come under binding caps. If the CDM is not an option, the only way these countries will be able to earn money through emissions reductions is by actually agreeing to caps.

This system may seem coercive, and to an extent it is, but it pales in comparison to the U.S./IMF efforts to bludgeon developing nations into reorganizing their economies to meet the needs of multinational corporations, often at tremendous human cost. In this context, telling the developing nations that they will not get additional development assistance until they make a commitment to help solve the world's climate problem hardly seems like cause for complaint, especially when the currently proposed CDM offers rewards to large corporations rather than the nations themselves.

There are clearly many political obstacles to bringing the developing nations into a Kyoto-type agreement, but this proposal could offer them enormous benefits for signing on. This fact was not lost on Argentina and Kazakhstan, who volunteered in Buenos Aires this year to take on binding emissions caps that would allow them to take part in the global trading system. By signing on to the plan laid out here, the leaders of these two countries set an example for the rest of the developing world. This plan can offer these countries substantial economic rewards for protecting the environment, while simultaneously providing benefits for workers in the United States. It may not eliminate the trade deficit, but it can significantly improve the U.S. trade balance, creating hundreds of thousands of additional manufacturing jobs. Most importantly, it would get the world on a path of emissions reduction that will significantly lessen the danger of global warming.