What do we expect from an international climate agreement? A perspective from a low-income country

by E. Somanathan

Overview

Although an effective solution to the climate change problem will require the cooperation of the developing countries, it is not clear that near-term greenhouse gas emission quotas from these countries are either feasible or desirable. This paper argues that a post-2012 international climate agreement should instead focus on creating incentives to stimulate research and development of new climate-friendly technologies.

Discussion

To limit the rise in global temperature to one or two degree C ° will require massive cuts in greenhouse gas emissions by the middle of the century. Since low-and middle-income countries, including China and India, will soon account for more than half of global CO_2 emissions, tackling the climate problem requires that they have the incentive to reduce their emissions substantially. However, since climate change is not a domestic political issue in developing countries, their governments are less likely to cut emissions substantially. Thus, an international agreement cannot realistically demand emissions quotas from developing countries that are below business-as-usual emissions.

This paper argues that an international climate agreement involving the developing countries is of secondary importance. A more important priority is generating technological change that lowers the price of alternatives to fossil fuel. There are two ways to stimulate this technological change. First, governments could adopt policies that raise the expected returns to investment in research and development (R&D). These policies could include emissions taxes, cap-and-trade systems, or traditional regulation. Because these policies would force firms to pay for their greenhouse gas emissions, they would create demand for low-carbon technologies and provide financial incentives for firms to invest in R&D. Unfortunately, there is currently little public support for these types of price signals, and so it is difficult to argue that raising energy prices through taxes or cap-and-trade should be the main instrument of public policy. Furthermore, private investments in R&D are likely to be larger if future demand is more certain. However, relying solely on price incentives in the face of opposing public opinion is not a realistic way of inducing certainty.

A better way to stimulate technological change is to increase public-sector R&D and subsidize private-sector R&D. Global public energy R&D investments have halved in real terms since 1980. However, increasing funding for energy R&D is likely to receive public support simply because it is a mechanism the public understands. For example, although most Americans dislike the idea of higher gas taxes, a majority do support raising taxes if the revenues are used for R&D for new non-polluting energy sources.

Key findings & recommendations

▸ *It is not clear that emissions trade between developed and developing countries is currently feasible or desirable.* Many developing countries with corrupt governments and weak institutional capacity are unlikely to be able to administer credible domestic cap-and-trade systems. Furthermore, even if some developing countries take on quotas in order sell their emissions permits to richer countries, the resulting increases in energy prices could impact the poor severely. Such price changes could also have perverse effects on climate and human health by encouraging the use of solid fuels for cooking.

➢ *R&D is a realistic way of making it economical for all countries, including developing countries, to reduce their CO_2 emissions.* R&D has the advantage that resources are spent now, rather than being promised in the future. It also accomplishes a transfer from rich to developing countries to induce the latter to cut emissions, in a manner that is likely to be acceptable to the public in the developed world.

➢ *A future international climate agreement should take advantage of areas in which there is public support for domestic action.* In developed countries, this means cap-and-trade, a greatly increased financial commitment to R&D, and expansion of existing labeling and standards to promote energy efficiency.

➢ *In the coming round of negotiations, an international agreement involving developing countries should confine itself to promoting technical cooperation.* The bulk of the finance for developing country action will have to come from the developed countries. Energy conservation and agriculture research are areas in which developing countries would see significant economic co-benefits, so these are areas that should be included in an agreement. In many developing countries, there is also considerable interest in improvements in energy efficiency. A formal agreement for sharing expertise and information between regulatory agencies would also improve the quality of many countries' regulation of energy, greenhouse gases, and associated pollutants. In addition, an agreement should support a major thrust in tropical agriculture to develop new varieties that will withstand climate change.

CONCLUSION

The major action that is needed to realize huge emissions reductions over the next few decades is the promotion of R&D that will make carbon-neutral energy sources much more competitive with fossil fuels. The developed countries will have to promote this R&D not only through domestic regulation, taxes, and tradeable permits, but also by committing more government funds to R&D for non-carbon energy sources.

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ABOUT THE HARVARD PROJECT ON INTERNATIONAL CLIMATE AGREEMENTS

The goal of the Harvard Project on International Climate Agreements is to help identify key design elements of a scientifically sound, economically rational, and politically pragmatic post-2012 international policy architecture for global climate change. It draws upon leading thinkers from academia, private industry, government, and non-governmental organizations from around the world to construct a small set of promising policy frameworks and then disseminate and discuss the design elements and frameworks with decision-makers. The Project is co-directed by Robert N. Stavins, Albert Pratt Professor of Business and Government, John F. Kennedy School of Government, Harvard University, and Joseph E. Aldy, Fellow, Resources for the Future. Major funding for the Harvard Project on International Climate Agreements is provided by a generous grant from the Climate Change Initiative of the Doris Duke Charitable Foundation.

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