

The Trade-Off among Carbon Emissions, Economic Growth and Poverty Reduction in India, by V. P. Ojha, SANDEE Working Paper No. 12-05

Abstract

This study examines the consequences of a) a domestic carbon tax policy, and, b) participation in a global tradable emission permits regime on carbon emissions, Gross Domestic Product (GDP), and poverty, in India. The results, based a computable general equilibrium model of the Indian economy, show that a carbon tax policy that simply recycles carbon tax revenues to households imposes heavy costs in terms of lower economic growth and higher poverty. However, the fall in GDP and rise in poverty can be minimized or even prevented if the emission restriction target is a very mild one and tax revenues are transferred to the poor. A soft emission reduction target is all that India needs to set for itself, given that even a ten percent annual reduction in aggregate emissions will bring down its per capita emissions to a level far below global per capita emissions. On the other hand, participation in the tradable emission permits regime opens up an opportunity for India to sell surplus permits. India would then be able to use the revenues from permits to speed up GDP growth and poverty reduction and keep its per capita emission below the 1990 per capita global emissions level.

Key words: CGE model, carbon emissions, economic growth, poverty reduction, India, climate change, carbon tax policy, tradable emission permits.