

Trade and Environment in India: A Computable General Equilibrium Analysis

Koushik Das

This paper examines general equilibrium implications of international trade and globalization on social welfare and environmental emission. It applies Computable General Equilibrium (CGE) modelling as our relevant methodology following Shoven and Whalley (1984). Constructing Energy/Environmental Social Accounting Matrix (SAM) and CGE model, it attempts to purport the effects of liberalized trade over different macroeconomic aspects, energy consumption and Green House Gas (GHG) emission. With the help of an index known as Pollution Terms of Trade (PTOT), it finds that trade and globalization in most of the cases aggravated the problem of GHG emission and made India 'Pollution Haven'.

Introduction

Environmental emission has received attention so far as global sustainable development is concerned. Advocates of free trade sometimes point out that developing economies emerge as the 'Pollution Haven' for dirty manufacturing industries migrated from developed nations owing to their lax environmental standard (Copeland and Taylor 1994). Free trade policy, although expanded global production structure by employing resources in efficient lines of production, may even damage the economy by changing pollution levels through *scale, technique and composition effects* (Grossman and Krueger 1993). Thus, while formulating appropriate energy/environmental policies serious questions arise on whether a less developed country like India has been 'Pollution Haven' due to the migration of dirty manufacturing industries during the period of economic liberalization.

With expanding globalization the Indian economy embraces rapid industrialization which leads to greater consumption of energy inputs as well as deterioration of environmental standards by the generation of air pollution. Nowadays a serious cognizance has developed among the policy-makers in search of low carbon emission strategies for India that could reduce carbon dioxide emission intensity by 25–30 per cent by 2020 starting from India's

Koushik Das, Assistant Professor, Department of Economics, Chandidas College, Burdwan University, West Bengal, Email: koushik10in2001@gmail.com.

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