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FISCAL IMPLICATIONS OF ENVIRONMENTAL TAXES IN INDIA: AN EXPLORATORY ANALYSIS

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ABSTRACT

The notion of using Pigouvian taxes as a corrective mechanism for environmental externalities, has been one of the most enduring and fundamental principles in environmental economics. What has been largely ignored by economists till recently, however, is that these taxes (like any other tax) will generate revenue. Thus, while they are not primarily a revenue instrument, Pigouvian taxes are of potential interest to fiscal experts.

In theory these taxes are set equal to the marginal social damage so as to internalise the social costs. However, this is no longer the case if the revenue generating aspect of these taxes is taken into consideration, as well as the fact that these taxes can be used in lieu of other distortionary taxes to reduce the deadweight loss of the tax system. In this situation an environmental tax can be higher, lower, or identical to a pure Pigouvian tax, depending on the tax elasticity. Thus, there is no *a priori* reason that incorporation of revenue objectives will lead to environmental tax rates being set too low.

In practice, environmental taxes have been primarily used in OECD countries where the major motivation has been to raise revenues, usually for activities related to environmental protection. In the Indian context, environmental taxes (broadly defined to include energy) have considerable revenue potential. In particular, it has been estimated that removal of energy subsidies in India could yield considerable additional revenue.

While there are no genuine Pigouvian taxes in India at present, there is considerable potential for introducing them particularly for industrial pollution (water and air), as well as transport-related pollution. In this context, this paper estimates the revenue potential of such taxes for selected industries, using net value added for industries classified as "dirty" by the Central Pollution Control Board (CPCB) and their fuel consumption. These figures provide an approximate magnitude of the tax base for a presumptive Pigouvian tax on these industries. A tax levied on these industries at the rate of 1 percent of fuel consumed or value added would, *ceteris paribus,* yield considerable revenue.

About the author:

Shreekant Gupta has worked as a policymaker and researcher in areas spanning energy, environment, urban policy and economics over the last 25 years. Most recently he was Director (in the rank of Additional Secretary to the Government of India), National Institute of Urban Affairs at New Delhi, a think tank on urban issues with close ties to the Indian government. Currently he is faculty (Associate Professor) at the LKY School of Public Policy. His other current affiliations include faculty member, Delhi School of Economics, University of Delhi; Honorary Director, Urban Governance Program, Centre for Civil Society, New Delhi, and Member of the Board of Trustees of Clean Air Initiative for Asian Cities (CAI-Asia) supported by the Asian Development Bank. He has taught at the universities of Delhi, Maryland and at Jawaharlal Nehru University and NUS. His teaching and research interests are in applied economics and policy including environment and development, climate change, urban economics, public economics and microeconomics. Earlier, he was Fellow National Institute of Public Finance and Policy (NIPFP), New Delhi (1995-97) and headed the Environmental Policy Cell at NIPFP. He has also worked as an environmental economist at the World Bank at Washington DC and as a career economist in the Indian government (Indian Economic Service cadre).

Shreekant has served on several national and international committees including the Task Force to Evaluate Market-Based Instruments for Pollution Abatement, Ministry of Environment and Forests, Government of India, the Economic Options Committee of the Montreal Protocol, United Nations Environment Program (UNEP) and the Intergovernmental Panel on Climate Change (IPCC) that was awarded the Nobel Peace Prize in 2007.

Shreekant received his doctorate in economics from the University of Maryland at College Park in 1993 and was Fulbright Fellow at the Massachusetts Institute of Technology (2001-2002) and Shastri Fellow at Queens University, Canada (summer 2001).