ABSTRACT

Across the world, intergovernmental fiscal transfers in federal structures have the principle of equity as a paramount feature; it is in this context that the question of ‘equity versus efficiency’ has been raised frequently. It has been argued that a total commitment to ‘equity’ often leads to “Rob-Peter-to-Pay-Paul approach”, creating disincentives to the relatively ‘well-off’ or the so called ‘efficient’ administrative units within the federation (of States). The resultant friction between the protagonists of ‘equity’ and of ‘efficiency’ could be minimized to a certain extent by ensuring that the fiscal transfers also take into account parameters other than the existing socio-economic parameters. The main premise of this study is that environmental externalities can potentially be an important such parameter.

Whereas the socio-economic functions in public domain have long been an integral part of inter-governmental fiscal transfers, the functions related to ecological services have not been reasonably included yet. This study attempts to evolve a framework for the design of fiscal transfers after taking into account environmental externalities in the Indian context. Given the broader questions of public acceptability and the need for simplicity in order to become operational, the framework has been kept simple by proposing both vertical transfers from the Centre to States as well as horizontal transfers among the States to be based on their relative ‘conservation measures’ and ‘consumption patterns’ that generate environmental externalities. Instead of merely using total forest area as the conservation measure, overall health of forests with the notion of ‘effective forest area’ based on the density of forest cover is proposed as an improved measure of the provision of ecological services by forests. From the choice of various parameters, the State-wise consumption of Motor Spirit (MS) and High Speed Diesel (HSD) was found to be the feasible parameter for identifying consumption patterns leading to negative externalities among the States.

Inter-State analysis of eligibility is done on the basis of “effective forest area” as a proxy for considering ecological services as positive externalities and “per capita consumption of HSD and MS” in comparison to
the national average for capturing negative externalities. Analysis reveals that while this methodology is suitable for comparatively larger States (in terms of area and population) having sufficient forest cover, smaller States and Union Territories (UTs), and states without adequate forest cover do need special treatment. Based on the district-wise ‘Environmental Index’ (EI), resources allocated to a particular State on the basis of environmental externalities, in turn, may be transferred to different districts in a state. This exercise has been done for various districts in the state of Andhra Pradesh.

The results of analysis show that while horizontal imbalance narrows down across the States, it will curb the tendency of free ridership among the constituent units. As the financial flows relatively increase to ecologically better performing but poorer recipient states, their equalitarian claim is reinforced. The model incorporates fiscal transfers from relatively well-off States to poorer States on the basis of environmental externalities. In the course of time, the intensity of engagement of fiscal transfers, on the basis of environmental externalities, could be gradually increased. A positive spin-off of this model is that it strengthens arguments for resource allocations on per capita basis in various international fora.