

AN EMPIRICAL INVESTIGATION OF ENVIRONMENTAL DEGRADATION IN INDIA

Abstract

Environmental degradation is one of the most widely discussed issues in resource and development economics. Due to environmental degradation, the loss of economic output, livelihood, and biodiversity has been noticed in developing countries. Therefore, environmental quality management is vital for developing countries like India in attaining the Sustainable Development Goals. In this vein, the thesis explores the drivers of environmental degradation in India by assessing the role of foreign energy aid inflows, total technological innovations and overseas eco-friendly innovation collaboration in carbon dioxide emissions function. Further, it considers total foreign aid inflows, total overseas innovation collaboration, real economic growth, total primary energy consumption, overall globalization, net foreign direct investment and remittance inflows as control variables in carbon dioxide emissions functions for India.

The secondary data for this study are drawn from various published sources, such as Aid Data Research Release, 2.1, Credit Reporting System (CRS), the Organization for Economic Co-operation and Development (OECD, 2010-2014), World Development Indicators (WDI), Konjunkturforschungsstelle (KOF) Swiss Economic Institute, World Intellectual Property Organization (WIPO), and Statistical Review of World Energy- British Petroleum (BP). These data sources have been used for the empirical analysis. However, the study period is not uniform for the three objectives due to different key independent variables (i.e. total foreign energy aid inflows, total technological innovations and overseas eco-friendly innovation collaboration). Besides, time series econometric tools have been employed for evaluating the stated goals.

The study finds foreign energy aid inflows and total technological innovations harm the environmental quality in India while overseas eco-friendly innovation collaboration improves it. The findings suggest that the Indian government should utilize foreign energy aid more towards the higher clean energy generation. Similarly, total technological innovations should be made eco-friendly in India to mitigate climate change and house greater overseas eco-friendly collaboration with other economies for long-term environmental quality sustainability.

Keywords: Environmental degradation; Foreign energy aid; Total technological innovations; Overseas eco-friendly innovation collaboration; Time series; India