EXECUTIVE SUMMARY OF
UGC MAJOR RESEARCH PROJECT

Impact of Environmental Emission on Total Factor Productivity Growth for Energy Intensive Industries in India

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So far as the energy intensity of the major energy intensive industries in India are concerned, we noticed a fall in energy intensity for all the industries except cement industry from pre to post-reform era when we have looked into the annual average growth rates. But, when we consider the trend growth rate of energy intensity of the concerned energy intensive industries, then we find that the energy intensity increases for the Indian iron and steel industry as well as for the aluminum industry in the post reform period. Now, for all the concerned energy intensive industries, the rate of capacity utilization falls from pre to post liberalized regime. Therefore, we can say that the industries are operating at underutilization of its capacity output. On the other hand, our results indicate that there exists a robust linear relationship between pollution and TFP growth for all the industries. We find that the pollution affects TFP growth negatively except for the Indian paper and paper product industries. This is due to the fact that the adjustment for the externality exceeds the traditional TFPG estimate and therefore the overall externality adjusted TFPG is negative. This result suggests that, if the externality associated with energy use is incorporated in our model, then the part of output growth attributed to technological change may reduce to some extent the increase in TFPG due to output growth.