

The Costs and Benefits of Reducing PM_{2.5} in South Asia
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Along with rapid economic growth in the past decade, South Asia, in general, has experienced increases in air pollution, which cause a myriad of harmful health effects. We focus on one of these pollutants, PM_{2.5}. We calibrate an overlapping generations model of economic growth to the South Asian experience from 1971 to 2001 and compute the effects of increases in spending on air pollution abatement on GDP per worker, the number of deaths, and on a variant of the human development index for the period 2002-2030. The model allows improvements in health to affect economic growth in a number of different ways including: (1) decreasing the number of deaths, and therefore changing the age structure of the population, (2) decreasing days of work lost due to illness, and (3) changing the age pattern of personal savings. The net effect of all the changes is that GDP per worker is slightly higher with the additional investments, the number of deaths is reduced, and the human development index is significantly higher. In South Asia, air pollution abatement investments more than pay for themselves.