

The impact of the crisis-induced reduction in air pollution on infant mortality in India: A policy perspective[†]

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ABSTRACT

Credible estimates of the health effects associated with changes in air pollution exposure are of considerable importance for research and policy agendas, especially for developing countries. This paper estimates the impact of the sharp reduction in particulate air pollution driven by the Global Financial Crisis of 2008 on district-level infant mortality in India. Utilizing plausibly exogenous geographic variation in the crisis-induced changes in air quality and novel data from household surveys and satellite-based sources, I find that the infant mortality rate fell by 24% more in the most affected districts, implying 1338 fewer infant deaths than would have occurred in the absence of the crisis. Analysis of the mechanisms indicates that the PM_{2.5} reductions affected infant mortality mainly through respiratory diseases and two biological mechanisms: in utero and post-birth PM_{2.5} exposure. Back-of-the-envelope calculations suggest that the estimated decline in infant mortality translates into a three-year after crisis total of 312.5 million U.S. dollars. The resulting health benefits could be used as a benchmark for assessing the effectiveness of the policies designed to improve air quality in India.

Keywords: Air Pollution, Infant Mortality, Crisis, India

JEL Codes: Q53, I12, O13

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