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Did the Clean Air Act cause the remarkable decline in sulfur dioxide concentrations?

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Summary: Over the last three decades, ambient concentrations of sulfur dioxide (SO₂) air pollution have declined by approximately 80%. This paper tests whether the 1970 Clean Air Act and its subsequent amendments caused this decline. The centerpiece of this legislation is the annual assignment of all counties to SO₂ nonattainment or attainment categories. Polluters face stricter regulations in nonattainment counties. There are two primary findings. First, regulators pay little attention to the statutory selection rule in their assignment of the SO₂ nonattainment designations. Second, SO₂ nonattainment status is associated with modest reductions in SO₂ air pollution, but a null hypothesis of zero effect generally cannot be rejected. This finding holds whether the estimated effect is obtained with linear adjustment or propensity score matching. Overall, the evidence suggests that the nonattainment designation played a minor role in the dramatic reduction of SO₂ concentrations over the last 30 years.

MSC:

91B76 Environmental economics (natural resource models, harvesting, pollution, etc.)

Cited in 4 Documents

Keywords:

Clean Air Act; Air pollution; Sulfur Dioxide; Benefits of environmental regulation

Full Text: [DOI](#)