



Overview of “Disparities in PM_{2.5} Air Pollution in The United States”

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One-Sentence Summary

PM_{2.5} air pollution has fallen substantially in the past four decades, but relative disparities persist.

■ Key Findings

- PM_{2.5} air pollution has fallen substantially in the past four decades, but relative disparities persist.
- What does that mean? The most polluted areas in 1981 are still the most polluted areas. The least polluted areas in 1981 are still the least polluted areas. And so on...
- Areas that were whiter and richer in 1981 have become relatively less polluted over time.
- Areas that became whiter and richer between 1981 and 2016 have become relatively less polluted over time.

■ Additional Details

- Particulate matter air pollution has adverse effects on health, wealth, and productivity.
- Particulate matter air pollution has declined 70% in the past four decades.
- But we haven't known how the distribution of PM_{2.5} air pollution across locations has changed over time. In other words, we haven't known how disparities have evolved.
- We analyze satellite and other particulate matter pollution data observed over 8.6 million distinct locations in the US for the 36 years between 1981 and 2016.
- We first show that the gaps in particulate matter air pollution between the most and least polluted locations fell over time.
- However, we then show relative disparities in particulate matter air pollution persist.
- The most polluted areas in 1981 are still the most polluted areas. The least polluted areas in 1981 are still the least polluted areas. And so on...
- We show that more polluted areas experienced larger reductions in particulate matter over time, but from much higher initial concentrations.
- As a consequence, relative disparities persist.
- We also show that areas that were whiter and richer in 1981 have become relatively less polluted over time.
- Areas that became whiter and richer between 1981 and 2016 have become relatively less polluted over time.