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# Cleaner Air Results in Higher Home Prices

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*During the 1970s, pollution regulations may have resulted in over \$80 billion in aggregate economic gains nationwide. In the 1980s ... homeowners accumulated \$50 billion of benefits.*

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Real estate agents delight in reciting to prospective homeowners a marketing mantra in which they insist that the only three things that matter in purchasing a property are: "location, location, location." But they might want to at least refine their definition of "location" so that it encompasses more than a home's proximity to good parks and schools and considers the very quality of the air that surrounds it.

That's because housing prices appear to get a substantial lift from localized reductions in particulate matter pollution and other air pollutants, according to an NBER Working Paper by **Kenneth Chay** and **Michael Greenstone**. Chay and Greenstone suggest that this relationship could help policymakers, who often focus on the economic downside of environmental laws, "measure the value of environmental resources and the monetary benefits of federal pollution regulations."

Their study, **Does Air Quality Matter? Evidence from the Housing Market** (NBER Working Paper No. [6826](#)), looks at 20 years of federal efforts to control air pollution in which regulations spawned by the Clean Air Act have set rigid air quality standards that are applied on a county-by-county basis. The authors compare changes in pollution levels and housing prices in so-called "non-attainment" areas, that is counties across the United States that have been forced to reduce pollutants in order to meet federal clean air requirements, to the changes that occurred in "attainment" counties that met the federal standards and were virtually unregulated.

Chay and Greenstone find that during the 1970s and 1980s particulate matter pollution declined substantially more in non-attainment counties, apparently prodded by the threat of regulatory action, than in attainment counties. Coinciding with these air quality improvements, home prices increased more in non-attainment counties relative to attainment areas -- by about 4.8 percent in the 1970s and about 3.9 percent in the 1980s. This evidence suggests that housing markets may capitalize environmental amenities into property values, which has been a point of some controversy in the previous literature.

Under one set of assumptions, Chay and Greenstone calculate that the cumulative effect is that during the 1970s, "pollution regulations may have resulted in over \$80 billion in aggregate economic gains" nationwide. In the 1980s they estimate that homeowners accumulated "\$50 billion of benefits." The authors state, "Taken literally, this result suggests that federal pollution regulations resulted in substantial monetary benefits for homeowners in regulated counties... In addition, it provides the first estimates of the economic value of federal environment policy which are based on the housing market."

The information that fueled Chay and Greenstone's analysis was culled from several sources, including the Code of Federal Regulations and the Environmental Protection Agency (for

county-by-county air quality data and attainment status) and the U.S. Census and the County and City Data Books (for local property values).

Chay and Greenstone note that the data indicate a strong cause-and-effect relationship between the regulations and improved air quality and higher property values. They do acknowledge that during the recession of the early 1980s, air quality improvements in some counties were probably attributable to such things as recession-induced plant closings. However, overall they conclude that "it appears that the most important predictor of changes in pollution is environmental regulation."

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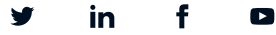
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