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## The Effect of Environmental Regulation on Plant-Level Product Mix: A Study of EPA's Cluster Rule<sup>★</sup>

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#### Abstract

This paper examines the effect of the U.S. Environmental Protection Agency's Cluster Rule on the product-mix decisions of plants in the pulp, paper, and paperboard industries. The Cluster Rule combines regulatory requirements from the Clean Air Act and Clean Water Act that are based on plants altering their production processes away from chlorine-based bleaching agents. In addition to, or instead of, altering production processes, plants may plausibly comply with the regulation by reducing output of bleached products or dropping some of these products entirely. Using a difference-indifference-in-differences approach, we find evidence that plants facing both air and water Cluster Rule regulation (treatment group) are more likely to drop bleached products relative to unbleached products compared to plants facing only air Cluster Rule regulation (control group). Furthermore, we find evidence that plants in the control group alter their product mixes toward bleached products.

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