ANDEAN WINDS OF WISDOM: AIR POLLUTION AND ACADEMIC ACHIEVEMENT IN COLOMBIA*

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Abstract. Using a comprehensive panel of pollution data at the station-hour level in Bogotá, Colombia, alongside national standardized test scores for all high school seniors, we investigate whether exposure to air pollution affects school performance. Our empirical strategy leverages plausibly exogenous variations in wind direction as an instrument for exposure to airborne particulate matter (PM2.5). Our findings indicate that a one-unit increase in PM2.5 is associated with a reduction in math scores by 0.02 standard deviations, with more pronounced effects observed for female students compared to male students. This research highlights the significant costs of pollution on human capital accumulation, emphasizing the need for policy interventions aimed at improving air quality to support educational outcomes.

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