

The effect of air pollution on labor supply in Italy. Evidence from social security data.

by
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Abstract

I provide causal evidence on the effect of air pollution on labor supply and productivity in Italy. I combine monthly data with workers' information for a population sample deriving from the National Social Security Institute aligned with air pollutant concentrations on a very refined time-space grid for the period between 2013 and 2015. In a quasi-experimental setting, I find that a higher concentration of PM10 causes a significant reduction in the extensive margin as proxied by working days and weekly absences. An increase of PM10 is also significantly associated to a higher probability of sick leaves, providing support to the hypothesis that health deterioration works as a transmission channel in reducing the labor supply. The productivity gap, in terms of salary paid, amounts to about 25 Euro/month for ten additional mcg/m³ of PM10. Substantial heterogeneity in the effects exists when disaggregating the analysis by economic sectors, regions and gender. An essential consideration for policy makers is that increases of labor force and gains in worker productivity deriving from a stricter air pollution regulation may offset both the detrimental effects of air pollution and the low political acceptability of environmental policies.