

MAKING THE INVISIBLE VISIBLE: THE IMPACTS OF REAL-TIME FEEDBACK ON INDOOR AIR POLLUTION*

Robert Metcalfe

University of Southern California & NBER

Sefi Roth

London School of Economics

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Abstract

Exposure to ambient air pollution has been shown to be detrimental to human health and has motivated many policies to reduce such pollution. However, given that humans spend 90% of their time indoors, we need to understand the degree of exposure to Indoor Air Pollution (IAP), and, if high, ways to reduce it. We design and implement a field experiment in London that monitors households' IAP and then randomly allocates some households to real-time feedback on their air pollution. We find that IAP is worse than ambient for a large fraction of the day, especially when residents are home. We find that the randomized feedback alone reduces IAP by 25% during occupancy time. We also explore the mechanisms for our findings and show that people are using more natural ventilation as a result of the feedback (i.e., opening up doors and windows to the outside world). Finally, we find that the treatment leads to more accurate beliefs in their exposure to both ambient and indoor air pollution and we estimate that the change in welfare from the introduction of the real-time feedback.

Keywords: indoor air pollution; real-time feedback; field experiment; welfare.

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