Air pollution, avoidance behaviour and children's respiratory health: Evidence from England

Presenter: Katharina Janke, PhD candidate at the Centre for Market and Public Organisation, University of Bristol

Date: 10th of December, 2013.

Abstract:
Despite progress in air pollution control, there are still concerns over the impact of poor air quality on health. As a result, governments increasingly issue information on air quality to enable vulnerable groups to avoid exposure. Avoidance behaviour potentially biases estimates of the health effects of air pollutants. But avoidance behaviour imposes a cost on individuals and therefore may not be taken in all circumstances. Thus, there may not be bias in all situations. This paper investigates this issue by exploiting panel data at the English local authority level to estimate the relationship between children's daily hospital emergency admissions for respiratory diseases and common air pollutants, while allowing for avoidance behaviour in response to air pollution alerts. A 1% increase in nitrogen dioxide or ozone concentrations increases hospital admissions by 0.1%. Avoidance behaviour appears to depend on its costs. Only for the subset of asthma admissions, where avoidance is less costly, does ignoring avoidance lead to underestimation of the health effects of air pollution.