

ENVIRONMENTAL AND URBAN ECONOMICS

THOUGHTS ON ENVIRONMENTAL AND URBAN ISSUES FROM AN ECONOMICS PERSPECTIVE.

THURSDAY, OCTOBER 05, 2006

Evaluating Programs to Reduce Diarrhea in rural Kenya by Improving Source Water Quality

I managed to attend an environmental economics seminar at Harvard yesterday. Michael Kremer presented a draft of his new paper "Spring Cleaning: Results from a Randomized Evaluation of Source Water Quality Improvement." (joint with Miguel, Leino and Zwane).

In rural Kenya, the local water supply is polluted from a number of sources including fecal matter running off from fields and people putting their hands in the streams to extract water.

Diarrhea kills 2 million people per year and accounts for 20% of kids' deaths.

Kremer and his co-authors were evaluating a program that attempts to improve source water quality by allowing people to extract water without putting their hands into the stream (think of a waterfall and capturing the downflowing water in a jar).

This treatment was randomly assigned so the authors have a control group. Some streams were treated with this engineering fix while others were not.

The authors collect data on actual water quality in the streams before and after and document that the treated streams do experience an increase in water quality.

Result #1: Is household water quality in the treated areas improved by the stream treatment? The research team shows that the household's water quality does improve but not to the same extent as the stream's improvement. Something is "lost in translation" --- is this a transportation issue? Is this a crowding out issue, that treated households take fewer pre-cautionary actions such as boiling water once they know that their stream has been treated?

Result #2: Children's health in the treated stream areas did not improve much.

This is the surprising result to me. Household water quality is cleaner but the kids are not healthier.

POSTED BY MATTHEW KAHN AT 6:54 AM 

1 COMMENTS:

 Milan said..

What was the sample size here? If n was too small, it is not surprising that no statistically significant effect on child health could be found.

11:35 AM

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