Fight Entropy

The Global Environment and Economic Development

Ourselves

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Valuing clean water in rural Kenya

My big sister spent a year in Malawi working on improving communal water infrastructure. She came home fed up because, among other things, it seemed like nobody was willing to pay for investments in their own infrastructure (if I recall correctly, the Clinton Foundation was trying to pay for the initial construction, but the communities weren't even willing to pay for the maintenance). I found this puzzling and wasn't sure I believed it at the time, but I guess I do now since the QJE says so. My big sister has really good intuition.

[This work suggests how public and private infrastructure can be compliments. Protection of public water sources isn't as effective (or highly valued, probably) when recontamination of water occurs in the home.]

SPRING CLEANING: RURAL WATER IMPACTS, VALUATION, AND PROPERTY RIGHTS INSTITUTIONS
MICHAEL KREMER, JESSICA LEINO, EDWARD MIGUEL, ALIX PETERSON ZWANE

Abstract: Using a randomized evaluation in Kenya, we measure health impacts of spring protection, an investment that improves source water quality. We also estimate households' valuation of spring protection and simulate the welfare impacts of alternatives to the current system of common property rights in water, which limits incentives for private investment. Spring infrastructure investments reduce fecal contamination by 66%, but household water quality improves less, due to recontamination. Child diarrhea falls by one quarter. Travel-cost based revealed preference estimates of households' valuations are much smaller than both stated preference valuations and health planners' valuations, and are consistent with models in which the demand for health is highly income elastic. We estimate that private property norms would generate little additional investment while imposing large static costs due to above-marginal-cost pricing, private property would function better at higher income levels or under water scarcity, and alternative institutions could yield Pareto improvements.

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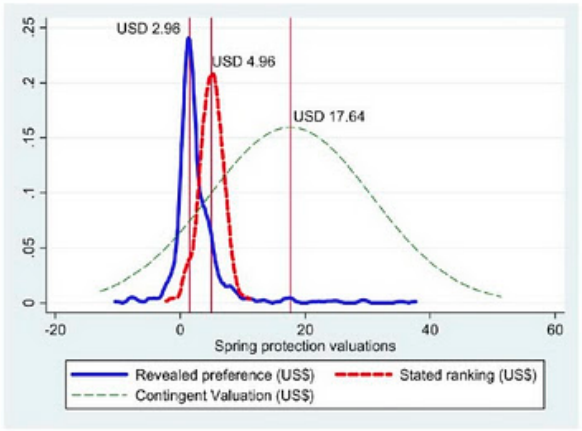

FIGURE II
Household Revealed Preference and Stated Preference Valuations of One Year of Spring Protection (2007)

Posted by Solomon Hsiang at 09:00

Labels: development, economics, empirical research, public finance, water resource