TEXAS A&M AGRILIFE RESEARCH | EXTENSION

TEXAS A&M UNIVERSITY

AGRICULTURE & LIFE SCIENCES

NAIMA FARAH

Post-Doctoral Research Associate
Texas A&M AgriLife Research Center, El Paso TX

Defensive Investment in Municipal Water Hardness Reduction

We produce estimates of household's willingness to pay (WTP) for reduction in water hardness using a defensive investment framework. Using total dissolved solids (TDS) data observed in municipal water supplies in combination with product-by-store level scanner data on water softeners and related product sales, we provide among the first revealed preference estimates of WTP for water hardness reduction and quality control. Exploiting instrumental variable regressions, we find that household's marginal WTP increases as the observed TDS in municipal water increases. Aggregating these estimated WTP at county level, we show how total WTP varies geographically, after controlling for income and related fixed effects. Our estimation provide important policy implications for optimal water hardness management by municipal water authorities, and those policies aimed to target salinity management within surface and subsurface water supplies.

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