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ISSUES IN THE EXPERIMENTAL DETERMINATION OF URBAN WATER DEMAND

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ABSTRACT: Concern over the adequacy of water resources in arid regions has led to increased interest in policies that promote water conservation. The success of these policies will be determined, in large part, by the accuracy of models of both the supply and demand sides of water markets. This research focuses solely on the demand side of the market for water. Existing research efforts have modeled demand for water, but in most cases, water prices found in the extant literature do not reflect full cost. Thus the predictive ability of these models for consumer response is over a very limited, and low, price range.

In this paper we suggest a way to augment existing studies with experimental data, a first step in an effort to align experimental responses to real world data. If experimental results can be generated that are consistent with actual water consumption we can extend the price, and thus the predictive range of the models, outside the current price ranges. Fifty-three water consumers from the Albuquerque, New Mexico metropolitan area participated in this project. Each consumer 1) supplied a water use history, 2) answered a detailed survey concerning water use and attitudes towards water scarcity, 3) provided basic demographic and socio-economic information, and 3) participated in an experiment that simulated water use in a variety of price, income and rainfall conditions. Our preliminary results indicate that a context-specific experiment can elicit responses that correlate to actual water use.

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