A Field Experiment to Estimate the Effects of Anchoring and Framing on Residents' Willingness to Purchase Water Runoff Management Technologies

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Abstract

Watersheds throughout the world have been severely polluted by nutrient-laden runoff that comes from industrial, agricultural, and residential sources. Efforts to reduce this runoff have focused on industrial and agricultural sources, while little attention has been paid to encouraging residents to reduce runoff from their properties. To study residents' willingness to adopt landscaping practices that reduce runoff, we conducted a field experiment in the Delaware River watershed. In the experiment, over three hundred adults participated in a series of random-price auctions that revealed their willingness to pay (WTP) for five products that reduce nutrient runoff. To study how WTP can be influenced by attributes of the choice architecture, we randomized the starting bid values (anchors) and the way in which the benefits of the five practices were framed. Compared to a neutral framing, the positive framing (using the product can improve water quality) increased average WTP by about one-third, while negative framing (failing to use the product can worsen water quality) had no detectable effect. The estimated effect on average WTP from the starting bid value depends greatly on how bids of $0 are modeled, but the results of all models imply that higher starting values lead to higher WTP. Although we believe the magnitudes of our results should be considered suggestive and we recommend replications with higher statistical power, the results from our experiment add to the evidence base that environmental programs can achieve policy-relevant gains in program performance through a series of small changes to the decision environment.

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