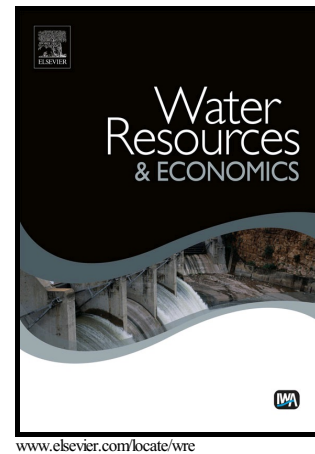


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The demand for tap water quality: Survey evidence on water hardness and aesthetic quality

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## The demand for tap water quality:

## Survey evidence on water hardness and aesthetic quality\*

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**Abstract**

We design a survey to provide quantitative evidence about household demand for qualitative aspects of tap water supply. We focus on two characteristics that are of importance for households: water hardness and aesthetic quality in terms of taste, smell and appearance. Our survey elicits expenditures on products that improve the overall experience of these characteristics of tap water quality, and administration targets a representative sample of the population in England and Wales. For water hardness, our results show that around 14% of households employ at least one water softener device or purchase products such as softening tablets or descaling agents. For the aesthetic quality of tap water, around 39% of households report some averting behaviour, the most common being the use of filtering devices, purchase of bottled water, or addition of squash or cordial. To study how expenditures on these products vary with the level of service quality, we match household data to highly disaggregated records on regional water hardness (in mg  $CaCO_3/l$ ) and aesthetic quality, as measured by the regional rate of complaints to the water service supplier. Our econometric analysis suggests that households' decision to incur averting expenditures varies with service quality in a statistically and economically significant manner, providing novel evidence that households actively respond to non-health related aspects of tap water quality.

**Keywords:** Water demand; Tap water quality; Water hardness; Revealed preferences; Averting behaviour; Cost-benefit analysis; Economic surveys.

**JEL Codes:** Q25, Q53, C83, L95, D13.

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