

A Behavioral Study on Social Feedbacks to Address Deterioration in Public Water Services

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Public water infrastructure provides basic services such as irrigation water that are essential for society. A critical challenge is to ensure adequate water service provision in the face of potential underinvestment to infrastructure. In the most basic sense, users pay a fee to a specialized water service provider who must then decide whether and how much of the raised revenue to invest into maintaining the quality of water service to meet the expectations of the users. This situation can potentially lead to a social problem in which providers might be tempted to pursue their own private gain by underinvesting in the infrastructure and barely or not meeting user expectations. What social feedbacks are available to users to address the issue? It has been hypothesized that users can exercise two social feedbacks to reverse the trend in water system: exit (shift to an alternative, better-performing infrastructure provider) and voice (expression of discontent and public opinion mobilization). The exit feedback works by causing a loss of revenue to providers, which incentivizes them to improve their service to prevent further user loss or win back users. The voice feedback works by inflicting direct management costs (e.g., loss of reputation, time spent to respond to such complaints, etc.) on poorly performing providers. However, still poorly understood are 1) which of the two feedbacks is more effective in improving water service and 2) potential interaction effects of these two feedbacks on the quality of service provision. In this study, we developed and conducted an online, human-subject behavioral experiment (via Amazon Mechanical Turk) to measure and compare the effectiveness of exit, voice and their combination on improvements in public water service by a single provider. We tested four experimental treatments: no feedback options given to users, only the exit feedback, only the voice feedback, and both feedbacks. The experimental results generated empirical insights about what kind of policy fixes are relatively advantageous in terms of public water service improvement, since our four treatments represents status quo, allowance of more competition in water market, allowance of more public participation, and both types of allowances, respectively.