

Household Water Source Substitution and Demand for Water Connections

Authors : Elizabeth Spink

Abstract : The United Nations' Sustainable Development Goal 6 sets a target for safe and affordable drinking water for all. Developing country governments aiming to achieve this goal often face significant challenges when trying to service last mile customers, particularly those in peri-urban and rural areas. Expansion of water networks often requires high connection fees from households, and demand for connections may be low if there are cheaper substitute sources of water available. This research studies the effect of the availability of substitute sources of water on demand for individual water connections in Livingstone, Zambia, using an event study analysis of metering campaigns. Metering campaigns reduce the share of a household's neighbors that can provide free water to the household if their water connection becomes disconnected due to nonpayment. The results show that household payments in newly metered regions increase by 10 percentage points in the months following metering events, with a decrease in disconnections of 6 percentage points for low-income households. To isolate the effect of changes in a household's substitution possibilities, a similar analysis is conducted among households that neighbor the metered region. These results show mixed evidence of the impact of substitutes on payment behavior and disconnections. The results suggest that metering may be effective in increasing household demand for individual water connections primarily through a lower monthly cost burden for newly metered households.

Keywords : piped-water access, water demand, water utilities, water sharing

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