Does User Participation Lead to Sense of Ownership for Rural Water Systems?

Evidence from Kenya

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Overview

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Motivation

Challenge: **Access** and **sustainability** of improved water sources in rural sub-Saharan Africa

Population unserved by improved an water source (millions).
*Source: UN-WHO JMP (2008)*
Research Questions

The assumption is…

What is community sense of ownership for the water system?
• Among all or only some?
• Measureable?

What forms of participation engender feelings of ownership among community members?
• Financial investment? Sweat equity? Decision-making processes?
• Does system design matter?
Study Site: Kenya

Sample Frame

Targeted sampling:
- Provinces and Districts

Random sampling:
- Piped water projects (n=50)
- Households (n=1,140)

Data collection activities

- Household surveys
- Leader, water committee, & operator interviews
- Technical assessments of water systems
- Women’s focus group discussions

Map by Anne Thebo
Ownership = \( f (Participation, Household, Project, Province) \)

- Ownership = low, moderate, high
- Participation = cash and labor contributions, decision making
- Household = water sources used, SES, leadership roles
- Project = age, secondary sources
- Province = fixed effect variable
# Findings: Sense of Ownership

## Household survey question: Composite measure (n = 1,095)

<table>
<thead>
<tr>
<th>Household survey question</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that I am one of the owners of the water system.</td>
<td>strongly disagree (1) ----- strongly agree (4)</td>
</tr>
<tr>
<td>My family is one of the owners of the water system.</td>
<td>strongly disagree (1) ----- strongly agree (4)</td>
</tr>
<tr>
<td>The water system is owned by all water project members.</td>
<td>strongly disagree (1) ----- strongly agree (4)</td>
</tr>
<tr>
<td>To what degree are you personally concerned with the O&amp;M of the piped water system?</td>
<td>no concern(1) ---------------- very concerned(4)</td>
</tr>
</tbody>
</table>

Composite measure (n = 1,095)
Findings: Community Participation

HIGH sense of ownership associated with:
• Non-token cash contributions
• Decisions about service received (large)
• Serving on the water committee

MODERATE sense of ownership associated with:
• Labor contributions
• Serving on the water committee

No association with:
• Token cash contributions
• In-kind contributions

Also:
Sense of ownership is higher, all else constant, among households with house or yard taps.
Conclusions

1. Sense of ownership can be measured
   • Establishes an empirical referent

2. Certain types of participation may enhance ownership
   • High: large cash investments, decisions
   • Moderate: labor
   • No effect for token cash or in-kind contributions
Thank you

Study participants

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