Characteristics of Stakeholder Networks Supporting Institutional Development in Rural Water Service Delivery

Duncan Ryan McNicholl

Department of Engineering

University of Cambridge

Hughes Hall

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ABSTRACT

This research applies social network analysis, the study of relationships between actors, to identify stakeholder relationships that support institutional development for rural water service delivery. Whereas technical aspects of water engineering are well understood, building institutional capacity for sustaining rural water services remains a challenge. Institutions exist with other stakeholders in a complex environment of relationships and power dynamics that influence how these institutions develop, and this research provides insight into how these influences can be both rigorously and practically understood.

Social network analysis is appropriate for studying relationships around institutions because it focuses on ties between actors. Recognition of its potential is growing in the water sector, but its utility for understanding how stakeholder networks in rural water sectors influence institutional development remains largely unexplored. Social network analysis deserves closer attention because the quantitative aspect of networks has potential to rigorously investigate the many relationships that institutions have, while visual representations of networks might help practitioners to better engage with these complex environments.

This research therefore tests the applicability of social network analysis in a broad range of contexts through cases studies in Africa, Asia, and South America. Each case study focuses on a specific instance of institutional development in rural water sectors – either government offices or community operator committees. Primary data collection in Ghana, Malawi, India, Tajikistan, Bangladesh, and Bolivia involved 162 interviews with governments, the private sector, non-governmental organisations, academic institutions, donor agencies, and community members. Each participant mapped their network during a facilitated exercise to identify who they interact with and how, and then commented on the importance of specific relationships. Data from these interviews were then combined to produce networks for analysis along with qualitative descriptions of network characteristics.

When viewed through a social network perspective, the case studies consistently reveal three characteristics of stakeholder networks that support institutional development. The first network characteristic is multiple information and skill ties between an institution and local stakeholders. Through these ties the institution can provide support to local stakeholders, and receive feedback on how to improve performance. The second network characteristic is strong information and skill ties between an institution and higher levels of sector hierarchy. These ties can provide ongoing support to overcome challenges and improve institutional

performance. The third characteristic is coordination between stakeholders at higher levels of sector hierarchy that have strong information and skill ties with an institution. Strong information and skill ties between these support providers can help them to align their efforts behind the same outcomes, and collaborate to complement each other's work.

These three network characteristics were identified as positive influences supporting institutional development for rural water supply in multiple countries. Although stakeholder relationships are nuanced and contextual, social network analysis can be used to identify where network characteristics that might support institutional development are missing. Practically, methods from this research can be used to analyse stakeholders and relationships around specific institutions in order to inform strategies for coordination and support to institutions. This research also contributes to the academic discourse on how complex stakeholder interactions can be studied through social network analysis, both quantitatively and qualitatively, to add rigour to the investigation of factors supporting institutional development. The academic and practical benefits identified in this research suggest that there is considerable potential for advancing the application of social network analysis for understanding influences that support institutional development in rural water supply.