

Infrastructure Optimization and Performance Monitoring: Empirical Findings from Uganda

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Abstract

There are a number of infrastructure water utilities, especially in developing countries that have tended to use climatic change challenges as scapegoat for unreliable water supply to citizens. In this paper, we argue that there are significant gains that infrastructure managers can realise, in the short to medium term, while addressing water scarcity problems as the wider climatic change challenges are being globally tackled! We single out effective infrastructure optimization through high-impact change management plans and incorporating strong water loss management strategies. In addition, we pinpoint use of economic criteria for plant capacity expansion, raw water source protection and effective stakeholder coordination as key ingredients to infrastructure optimization. Further, the paper investigates modes of infrastructure performance monitoring. Using a quantitative survey method and empirical data from 14 NWSC water utilities, the paper concludes that both process and output oriented monitoring approaches (measured by attitudinal indicators) are positively correlated with monitoring effectiveness and subsequently the technical efficiency change (catch-up) of infrastructure utilities. This study outlines an important issue that has not been adequately researched: the extent to which feedback and information flows from the principal to the agent could improve the capacity of the agent to conduct business.

Key Words: Infrastructure management, water scarcity, efficiency change, water loss management, source protection, monitoring.

For more details please refer to the Journal.