

ABSTRACT

This research delved into examining the causal relationship between accessibility to improved water sources and household income in Tanzania, with a focus on the Msalala District Council in the Shinyanga Region. Specifically, the study examined whether access to improved water sources Granger causes household income. in Tanzania, Furthermore, it explored the reciprocal relationship by assessing whether household income Granger causes access to improved water sources in the Tanzanian context. Additionally, the study scrutinized the presence of co-integration between access to improved water sources and household income in Tanzania. The theoretical frameworks of Human Capital Theory, Resource-Based Theory, and Capability Approach guided this investigation. The descriptive analysis of the data revealed that Household Water Connection in Msalala District Council showed a mean value of approximately 83.83, indicating a certain level of access to improved water sources. However, notable variability (with a variance of 6,943.968) and a slight right-skewness were observed, suggesting varying levels of water connection and the existence of outliers. In terms of Household Income in the study area, the figure was approximately TZS 990,215.20, showcasing significant income disparities (evidenced by high variance) and a slightly right-skewed distribution with indications of outliers. Unit root tests confirmed the stationary nature of both variables. The regression model findings illustrated that Household Water Connection elucidates 83.48% of the variance in Household Income. This relationship exhibited positivity, with a one-unit increase in Household Water Connection correlating with a 3.15-unit increase in Household Income. The Johansen test outcomes indicated cointegration, suggesting a sustained relationship between the variables over the long term. Furthermore, Granger causality tests established a directional causal link from Household Water Connection to Household Income. Diagnostic tests validated the model's integrity and dependability, collectively implying that Household Water Connection significantly influences Household Income in the studied region. Continuing with the analysis, these findings carry significant implications for both theoretical understanding and practical applications. The presence of a Granger-causal relationship from Household Water Connection to Household Income suggests that interventions and policies aimed at improving access to clean water sources can be strategic in fostering economic growth in the Msalala District Council and, by extension, in the broader Tanzanian context.

Key terms: *Water Connection, Granger causality, Household income,*