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# Similarity and dissimilarity in water services provision in counties and water services boards of Kenya

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Principal component analysis has been applied to eight dimensionless water services provision parameters for forty three administrative counties and eight water services boards of Kenya, in order to group the parameters under different components based on significant correlations. Good correlation (r=0.63) exist between water supply coverage (Cw) and the viability of water services utilities (Comc), while the hours of supply (Hs) is also correlated (r=0.55) to the viability of water services utilities. Non-Revenue Water (NRW) showed negative correlation with the coverage of water supply and viability of water services utilities. In fact these two parameters showed low correlation (r<0.3) with any of the other remaining parameters. Furthermore, the similarity and dissimilarity between the counties and water services boards in terms of water services provision is evaluated. In relation to benchmark conditions, a lot of work still needs to be done to realize ideal status. Tharaka-Nithi, Uasin-Gishu, Kakamega, Bungoma, Busia, Trans-Nzoia, Meru, Garissa and Kisumu counties formed the cluster of best performing counties with a strong showing in Non-Revenue Water, viability of water services utilities, coverage of water services, hours of supply and a weak showing in Cwb i.e., the ratio of cost of water billed to the average tariff. Migori, Homa-Bay, Elgeyo-Marakwet, Vihiga and West-Pokot counties are clustered together with a strong showing on ratio of cost of water produced to the average tariff (Cwp) and NRW but weak sewerage service coverage (Cs), population within the service area (WSPp) and Comc appear to be the worst performers. Athi and Lake Victoria North Water services boards though not clustered together are the best performers while Tanathi water services board is the worst performer. Generally, utilities with weak technical performance were found to do poorly financial and also offered poor customer care and quality of service. This study, therefore, is a key in facilitating cross-utility comparison.

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