African Journal of Epistemology and Indigenous Knowledge Systems (IKS)

Methodological Evaluation of Water Treatment Facilities in South Africa Using Panel Data for Yield Improvement Analysis

Sipho Motshega[1]

[1] Department of Mechanical Engineering, University of Venda

Published: 08 February 2012 | **Received:** 14 December 2011 | **Accepted:** 14 January 2012

Correspondence: smotshega@aol.com

DOI: 10.5281/zenodo.18972980

Author notes

Sipho Motshega is affiliated with Department of Mechanical Engineering, University of Venda and focuses on Engineering research in Africa.

Abstract

Water treatment facilities in South Africa are crucial for ensuring safe drinking water. However, their performance varies significantly across different regions. Panel data regression models were employed to analyse the impact of various variables on water yield efficiency. A significant positive relationship was observed between investment in infrastructure and water yield, with an estimated coefficient of 0.85 (95% CI: [0.72, 0.98]). Investment in infrastructure is a key factor for improving water treatment facility yields. Funding should be directed towards upgrading existing facilities to enhance their performance.

Keywords: *African, Panel Data, Econometrics, Water Treatment, Regression Analysis, Efficiency, Geographic Information Systems*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ REQUEST FULL PAPER

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa

Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge