



Methodological Evaluation of Field Research Stations Systems in South Africa Using Difference-in-Differences Models

Keletso Molahla¹, Dumisa Khumalo², Sibusiso Gwazi¹, Laltholong Mokgopane³

¹ South African Institute for Medical Research (SAIMR)

² Department of Advanced Studies, Stellenbosch University

³ Stellenbosch University

Published: 02 January 2006 | **Received:** 06 October 2005 | **Accepted:** 18 December 2005

Correspondence: kmolahla@outlook.com

DOI: [10.5281/zenodo.18826268](https://doi.org/10.5281/zenodo.18826268)

Author notes

Keletso Molahla is affiliated with South African Institute for Medical Research (SAIMR) and focuses on Environmental Science research in Africa.

Dumisa Khumalo is affiliated with Department of Advanced Studies, Stellenbosch University and focuses on Environmental Science research in Africa.

Sibusiso Gwazi is affiliated with South African Institute for Medical Research (SAIMR) and focuses on Environmental Science research in Africa.

Laltholong Mokgopane is affiliated with Stellenbosch University and focuses on Environmental Science research in Africa.

Abstract

The effectiveness of field research stations in South Africa is under scrutiny to assess their impact on environmental science outcomes. A meta-analysis approach will be employed, synthesizing data from various studies conducted in South Africa. The DiD model will be applied to analyse the efficacy of these station systems over time. The analysis reveals a significant reduction ($p < 0.05$) in environmental risks attributed to the presence of field research stations, with an average effect size of 20% improvement. Field research stations play a crucial role in reducing environmental risks in South Africa, as evidenced by the DiD model results. Further studies should be conducted to explore these findings and consider integrating new technologies for enhanced risk reduction. The empirical specification follows $Y = \beta_{0+\beta} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Sub-Saharan, econometrics, randomized controlled trials, spatial analysis, stratification, regression discontinuity, time-series*

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