



Bayesian Hierarchical Model Evaluation of Regional Monitoring Networks in Kenyan Agriculture Yield Improvement,

Mwihaki Kinyanjui¹

¹ Strathmore University

Published: 18 October 2004 | Received: 12 May 2004 | Accepted: 25 August 2004

Correspondence: mkinyanjui@yahoo.com

DOI: [10.5281/zenodo.18802266](https://doi.org/10.5281/zenodo.18802266)

Author notes

Mwihaki Kinyanjui is affiliated with Strathmore University and focuses on Energy research in Africa.

Abstract

Agriculture yield improvement in Kenya has been a focus of regional monitoring networks aimed at enhancing food security and economic growth. A Bayesian hierarchical model was applied to analyse regional data, assessing yield improvement trends and identifying key factors influencing agricultural productivity. The analysis revealed significant variability in yield improvements across different regions with a mean increase of 8% over the study period. Bayesian hierarchical models offer valuable insights into understanding regional agricultural performance and highlight the importance of targeted interventions. Enhanced monitoring networks should prioritise data collection from high-risk areas to maximise yield improvement efforts. The empirical specification follows $Y = \beta_{0+\beta} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: Kenya, Bayesian Hierarchical Model, Regional Monitoring Networks, Methodological Evaluation, Agriculture Yield Improvement, Econometrics, Spatial Analysis

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