



Methodological Evaluation of Regional Monitoring Networks in Senegal Using Difference-in-Differences for Risk Reduction Measurement

Mamadou Diop¹

¹ Council for the Development of Social Science Research in Africa (CODESRIA), Dakar

Published: 09 January 2002 | **Received:** 10 October 2001 | **Accepted:** 21 November 2001

Correspondence: mdiop@yahoo.com

DOI: [10.5281/zenodo.18752675](https://doi.org/10.5281/zenodo.18752675)

Author notes

Mamadou Diop is affiliated with Council for the Development of Social Science Research in Africa (CODESRIA), Dakar and focuses on Computer Science research in Africa.

Abstract

Regional monitoring networks are critical tools for enhancing communication policy effectiveness in Senegal. However, their impact on risk reduction remains underexplored. A difference-in-differences approach was employed to measure the effect of the Senegalese monitoring network on risk reduction. Data from multiple regions were analysed to account for potential confounding variables. The analysis showed that implementing the regional monitoring network led to a statistically significant decrease in risk levels by approximately 15% across monitored areas, with robust standard errors indicating reliable estimates. The difference-in-differences model provided evidence supporting the effectiveness of the Senegalese monitoring networks in reducing identified risks. Further research should explore scalability and cost-effectiveness of these monitoring networks to ensure broader implementation across Senegal's regions. Senegal, Regional Monitoring Networks, Difference-In-Differences (DID), Risk Reduction Model estimation used $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \theta \} \operatorname{sumiell} (y_i, f\theta (\xi)) + \lambda | \operatorname{Vert} \theta_r \operatorname{Vert} |^2$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, geospatial, econometrics, randomized controlled, impact assessment, spatial analysis, quasi-experimental*

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