



# Methodological Assessment of Smallholder Farm Systems in Senegal: A Quasi-Experimental Approach to Cost-Efficiency Evaluation

Oumar Sène<sup>1</sup>

<sup>1</sup> Department of Animal Science, Université Alioune Diop de Bambey (UADB)

**Published:** 11 March 2008 | **Received:** 25 December 2007 | **Accepted:** 30 January 2008

**Correspondence:** [osne@yahoo.com](mailto:osne@yahoo.com)

**DOI:** [10.5281/zenodo.18869086](https://doi.org/10.5281/zenodo.18869086)

## Author notes

*Oumar Sène is affiliated with Department of Animal Science, Université Alioune Diop de Bambey (UADB) and focuses on Agriculture research in Africa.*

## Abstract

Smallholder farming systems in Senegal are characterized by diverse agronomic practices and resource constraints. A systematic literature review employing rigorous inclusion criteria was conducted. Studies were evaluated based on their design, data sources, and analytical methods for measuring cost-effectiveness. Findings indicate that while some studies used regression discontinuity designs to assess cost-efficiency, there is a lack of consensus regarding the interpretation of results across different contexts in Senegal. The review highlights the need for standardised methodologies and transparent reporting practices to enhance comparability and reliability of cost-effectiveness assessments. Researchers are encouraged to adopt robust quasi-experimental designs, including regression discontinuity analysis, with clear documentation of assumptions and limitations. The empirical specification follows  $Y = \beta_{0+\beta} p X + \text{varepsilon}$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** *African agriculture, smallholder farming, resource management, cost-effectiveness, econometrics, methodology, quasi-experimentation*

## 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](mailto: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](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge