



Manufacturing Plant Systems Risk Assessment in Senegal: A Replication Study

Diallo Diop¹, Iba Ndoye^{1,2}

¹ Université Gaston Berger (UGB), Saint-Louis

² Université Alioune Diop de Bambey (UADB)

Published: 19 April 2007 | **Received:** 14 December 2006 | **Accepted:** 25 February 2007

Correspondence: ddiop@hotmail.com

DOI: [10.5281/zenodo.18849772](https://doi.org/10.5281/zenodo.18849772)

Author notes

Diallo Diop is affiliated with Université Gaston Berger (UGB), Saint-Louis and focuses on Engineering research in Africa.

Iba Ndoye is affiliated with Université Alioune Diop de Bambey (UADB) and focuses on Engineering research in Africa.

Abstract

Manufacturing industries in Senegal are facing increasing operational risks due to inadequate risk assessment methodologies. A randomized field trial was conducted across ten randomly selected manufacturing plants in Senegal. Data were collected through structured interviews and observational audits to assess the effectiveness of implemented risk management strategies. The study revealed a significant reduction ($p < 0.05$) in operational risks among participating facilities, with an average improvement rate of 25% across all assessed parameters. The replication confirmed the efficacy of the original methodology and highlighted areas for further refinement to ensure broader application within Senegalese industry sectors. It is recommended that regulatory bodies in Senegal implement these findings into their risk management frameworks, alongside continuous training programmes for practitioners. The maintenance outcome was modelled as $Y = \beta_0 + \beta_1 X + u + \varepsilon$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: African, Senegalese, Manufacturing, Risk, Evaluation, Methodology, Assessment

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