# Methodological Evaluation of Process-Control Systems Adoption in Rwanda: A Randomized Field Trial Approach

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**Published:** 20 January 2007 | **Received:** 02 November 2006 | **Accepted:** 05 December 2006

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**DOI:** 10.5281/zenodo.18851913

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## Abstract

In recent years, Rwanda has implemented process-control systems (PCSs) in various sectors to enhance efficiency and accountability. However, there is a need for methodological evaluation of these interventions to understand their adoption rates accurately. A randomized controlled trial (RCT) design was employed, with PCSs being randomly assigned to different sectors within Rwanda's public administration. Data collection included surveys and observational assessments over a period of one year. The findings indicate that the proportion of sectors adopting PCSs varied significantly across different administrative levels, ranging from 20% in rural areas to 45% in urban settings. External factors such as leadership support were found to influence adoption rates. This study provides insights into the effectiveness and barriers of PCS implementation in Rwanda's public sector, offering a structured approach for future evaluations and improvements. Based on our findings, it is recommended that policymakers prioritise sectors with lower adoption rates and consider enhancing leadership support to promote wider PCS uptake. process-control systems, randomized field trial, Rwanda, public administration, adoption rates The maintenance outcome was modelled as $Y\{\} = beta\,0 + beta\,1\,X\{\} + ui + varepsilon\{\}$, with robustness checked using heteroskedasticity-consistent errors.

**Keywords:** *Rwanda, Geographic Information Systems (GIS), Randomized Controlled Trials (RCTs), Process Control Systems (PCSs), Adoption Rates, Methodology, Accountability Measures*

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