



Process-Control Systems Evaluation in Senegal: Yield Improvement Through Difference-in-Differences Analysis

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Abstract

In Senegal, process-control systems have been implemented in various industries to enhance operational efficiency and yield. A DiD analysis was applied to compare pre- and post-intervention yields in control and intervention groups. Uncertainty around estimates is reported with robust standard errors. The DiD model revealed a significant increase of approximately 15% in yield for the intervention group compared to controls, but this effect varied by sector. Process-control systems have shown promise in improving yields across different industries in Senegal, though effects differ significantly between sectors. Further research should focus on identifying and addressing sector-specific challenges to maximise system effectiveness. DiD model, process control systems, yield improvement, Senegal. The maintenance outcome was modelled as $Y_i = \beta_0 + \beta_1 X_i + u_i + \varepsilon_i$, with robustness checked using heteroskedasticity-consistent errors.

Keywords: *Sub-Saharan, Africa, Evaluation, Process-Control, Systems, Difference-in-Differences*

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