



Methodological Evaluation of Manufacturing Plant Systems in Rwanda: Randomized Field Trial on Adoption Rates

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Abstract

Manufacturing plants in Rwanda have been increasingly adopting advanced systems to improve efficiency and quality. A randomized field trial was conducted across ten manufacturing sites. Data collection included surveys and direct observations over six months. The trial revealed that 70% of participants adopted new system features within the first three months, indicating a significant rate of adoption among participating plants. The study confirms high adoption rates for the tested systems, providing insights into their practical utility in Rwanda's manufacturing sector. Manufacturers should prioritise training and support to facilitate smoother integration of new technologies. The maintenance outcome was modelled as $Y_i = \beta_0 + \beta_1 X_i + u_i + \epsilon_i$, with robustness checked using heteroskedasticity-consistent errors.

Keywords:

Rwandan

Geographic

Terms:

Methodological

Randomization

Evaluation

Sampling

Experimental

Qualitative

Terms:

Design

Analysis

Theoretical

Adoption

Innovation

Technology

Process

Operational Efficiency Analysis

Improvement

Terms:

Theory

Diffusion

Transfer

Techniques

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