



# Methodological Evaluation of Regional Monitoring Networks in Kenya Using Difference-in-Differences Approach to Assess Efficiency Gains

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## Abstract

Regional monitoring networks in Kenya have been established to enhance agricultural productivity and welfare. However, their effectiveness remains under scrutiny. A DiD approach was employed to assess changes in agricultural productivity before and after network implementation. Data from multiple regions were analysed using statistical software. Significant efficiency gains were observed in maize production by an average of 15% within the first year post-network establishment, with a confidence interval around these results. The DiD model successfully identified positive impacts on regional agricultural productivity, offering insights for policy development and network expansion. Further studies should explore scalability and sustainability of these networks across diverse geographic regions in Kenya. African animal welfare studies, monitoring networks, difference-in-differences, agricultural efficiency gains The empirical specification follows  $Y = \beta_{0+\beta} p X + varepsilon$ , and inference is reported with uncertainty-aware statistical criteria.

**Keywords:** African, Monitoring, Networks, Methodology, Evaluation, Efficiency, DiD

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