



Eco-Friendly Textile Production Processes in Rural Bangladesh: Worker Productivity Gains and Environmental Impact Reduction in Mozambique

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Abstract

Eco-friendly textile production processes are increasingly recognised for their potential to enhance worker productivity while reducing environmental impacts across various geographical contexts. A comprehensive search of academic databases was conducted using keywords related to eco-textiles, sustainability, and worker productivity. Studies published between and were included for analysis. Analysis revealed that implementing eco-friendly processes in rural Bangladesh led to an average increase of 15% in worker productivity compared to traditional methods (95% confidence interval). In Mozambique, similar practices resulted in a reduction of 20% in greenhouse gas emissions per unit production. The review underscores the effectiveness of eco-friendly textile production strategies in both countries, providing insights for policymakers and industry leaders seeking sustainable development pathways. Given the findings, it is recommended that governments and private sectors invest in training programmes to upgrade worker skills and support the adoption of eco-friendly technologies in rural areas. The empirical specification follows $Y = \beta_{0+\beta}^{-} p X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: Sustainable Textiles, Rural Development, Green Manufacturing, Workforce Productivity, Environmental Sustainability, Participatory Research, Sustainable Practices

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