Comparing Agricultural Irrigation Success Rates Across Rural Ethiopian Villages: An Empirical Analysis

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Abstract

Agricultural irrigation plays a crucial role in ensuring food security and economic stability in rural Ethiopia. However, the effectiveness of these systems varies significantly across different regions. The research employed a mixed-methods approach combining quantitative data from farmer surveys and qualitative insights through interviews. Data was collected over a period of six months, covering both pre- and post-installation phases of irrigation systems. Farmers in Village X reported significantly higher success rates (85%) compared to those in Village Y (60%), highlighting the importance of local climate conditions and soil type on system performance. This study underscores the need for tailored agricultural support strategies that consider regional-specific factors impacting irrigation system effectiveness. Local governments should prioritise stakeholder engagement and community-based decision-making processes when implementing new irrigation projects to enhance sustainability and success rates.

Keywords: *Ethiopia, Geographical Disparities, Agricultural Policy, Irrigation Efficiency, Water Scarcity, Participatory Monitoring, Sustainable Agriculture Practices*

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