

## The Impacts of Small-Scale Irrigation on Nutritious Diets and Women Empowerment: Evidence from Ethiopia



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### SUMMARY

Small-scale irrigation is increasingly recognized as a pivotal strategy for improving agricultural productivity and food security in sub-Saharan Africa, especially amidst growing climate variability and changes. Over the past decades, small-scale irrigation has expanded rapidly in sub-Saharan Africa, providing smallholder farmers with an opportunity to improve their livelihoods, diets and resilience to climate change. While existing evidence highlights its wide-ranging benefits, including improved food security, crop diversification, and employment opportunities, less attention has been devoted to understanding its effects on nutritious diets, women's empowerment, and gender equality.

This study seeks to fill this gap by rigorously examining the causal impacts of small-scale irrigation on these critical dimensions, utilizing data from the "Megetch Pump Irrigation and Drainage Project (MPIDP)" in Ethiopia's Amhara Regional State. Employing a plot-level Geographic Regression Discontinuity (GRD) design and survey data, we estimate the causal impact of access to irrigation on women's empowerment and nutrition diets, leveraging the unique topographical setup of the irrigation command area and canal construction. Our finding suggests that access to irrigation does not exhibit a significant impact on overall empowerment levels for both women and men. Gender parity among the beneficiaries remains largely unchanged. It is worth noting that empowerment levels were already relatively high in the study area, across various pro-WEAI indicators.

Despite the overall impact, access to irrigation

### Project Details

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#### Implementing Institute(s):

University of Gondar

enhances women's likelihood of achieving empowerment in terms of decision-making power in productive activities and access to financial services. This instrumental agency measure suggests a positive step towards economic empowerment. However, there is a noteworthy decrease in some individual empowerment indicators, particularly in terms of respect among household members and self-efficacy. Even with observing a significant increase in dry-season crop production attributed to irrigation, there is no substantial evidence of improvement in nutritional outcomes. This result may be influenced by the government's focus on increasing wheat production, directing irrigated land towards this crop.

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