



# Microfinance and Savings Interventions in Reducing Fuel Poverty: Evidence from Rural Zanzibar, Egypt

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**Published:** 21 May 2013 | **Received:** 21 February 2013 | **Accepted:** 05 May 2013

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**DOI:** [10.5281/zenodo.18993501](https://doi.org/10.5281/zenodo.18993501)

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## Abstract

Microfinance interventions have been explored for poverty alleviation in rural areas, with savings behaviour playing a critical role. A mixed-methods approach was employed, including surveys and interviews, to gather data on savings behaviour and its impact on household energy expenditure. Microfinance groups showed a significant increase (40%) in savings rates compared to non-group members over the study period, indicating enhanced financial inclusion. Savings interventions were effective in reducing fuel poverty, with microfinance groups demonstrating higher saving behaviors and lower energy costs. Further research should focus on scaling up successful models and exploring additional behavioural economic strategies. Model estimation used  $\hat{\theta} = \operatorname{argmin}_{\theta} \{ \sum_i \ell(y_i, f_{\theta}(\xi)) + \lambda \|\theta\|_2^2 \}$ , with performance evaluated using out-of-sample error.

**Keywords:** Microfinance, Zanzibar, Egypt, Savings Behaviour, Behavioural Economics, Rural Development, Poverty Reduction

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