



Chapter 2

Microfinance, Energy Poverty, and Sustainability: The Case of Tanzania

Pendo Shukrani Kasoga

 <https://orcid.org/0000-0001-6634-3020>
The University of Dodoma, Tanzania

Amani Gration Tegambwage

 <https://orcid.org/0000-0002-9529-4712>
The University of Dodoma, Tanzania

ABSTRACT

The role of microfinance in reducing energy poverty among Tanzanian micro-borrowers is examined in this chapter. A standardized questionnaire was used to conduct a survey of 490 micro-borrowers. The data was analyzed using the multiple regression technique. Micro-borrowers are eager to spend on modern energy sources for cooking and other activities, according to the findings. Affordability and willingness to spend on contemporary energy sources for cooking have a substantial positive impact on their usage. The willingness to utilize modern energy sources for other purposes has a significant positive impact on their usage. Age, marital status, and education have no bearing on the use of modern energy sources for cooking and other purposes. The use of modern energy sources for other purposes, but not for cooking, is significantly influenced by household size. Microcredits customized for contemporary energy sources should be implemented to combat energy poverty.

INTRODUCTION

Access to clean, affordable, reliable, and contemporary energy sources has been connected to the Sustainable Development Goals (SDGs) (Crentsil *et al.*, 2019). 2.5 billion People utilize traditional biomass for cooking, 120 million use kerosene, and 170 million use coal (IEA, 2017). Around 905 million people in Sub-Saharan Africa (SSA) do not have access to clean cooking fuels, while 578 million

DOI: 10.4018/978-1-7998-8210-7.ch002

do not have access to electricity (IEA, 2020). Around 80% of all Tanzanian families rely on traditional energy sources like firewood and charcoal, with over 90% of rural and disadvantaged households doing so (World Bank, 2016).

The high prevalence of energy poverty has serious socioeconomic consequences for people's health, livelihoods, and social well-being (Churchill *et al.*, 2020a). As such, energy poverty can be seen as one of the drivers underlying extreme income poverty among households. Hence, lowering energy poverty serves as a catalyst for many other development goals through bolstering microfinance institutions' social aim of alleviating income poverty and improving the well-being of micro-borrowers (Rafay, *et al.*, 2020). Low purchasing power, on the other hand, is mentioned by Koomson and Danquah (2021) as one of the issues impeding households' exit from energy poverty. This implies that energy and income poverty are intertwined. In other words, energy poverty leads to income poverty and vice versa (Boutabba, 2020; Groh & Taylor, 2015; IRENA, 2019; PAMIGA, 2020; World Bank, 2019; Aziz *et al.*, 2020). Since microfinance has been identified as a way to alleviate income poverty and improve household wealth (Allet, 2016; Du Can *et al.*, 2018; Koomson & Danquah, 2021), it is also expected to relieve energy poverty among the poor (Yunus, 1999).

Despite increased access to microfinance among Tanzania's poor (Kasoga, 2020), the majority of Tanzania's poor still live in energy poverty (World Bank, 2016). This circumstance necessitates an empirical study of the effects of microfinance on energy poverty reduction, with a special focus on the following research questions: Are micro-borrowers willing to use and afford contemporary sources of energy? Is there a relationship between micro-borrowers' willingness and ability to use contemporary energy sources and the use of contemporary energy sources?

Adusah-Poku and Takeuchi (2019) argue that in order to alleviate energy poverty, households must be ready to spend on contemporary fuels as they become more widely available. Similarly, a home may be in energy poverty due to low income and high energy costs (WEO, 2017). Income poverty is a significant driver of energy poverty, but it is neither the only reason nor even a required condition for energy poverty (WEO, 2017). Because there is no universal consensus on the influence of microfinance on energy poverty reduction around the world, and because energy poverty is a context-specific phenomenon (Kumar, 2020), it is necessary to investigate the role of microfinance in eradicating energy poverty in Tanzania.

Boutabba *et al.* (2020), Groh and Taylor (2015), Levai *et al.* (2011), Mohiuddin (2006), Morris *et al.* (2007), and Rao *et al.* (2009) are among the few research studies in the literature that has focused on microfinance and energy poverty. This chapter adds to the body of knowledge by presenting evidence of the impact of microfinance on the decrease in energy poverty among Tanzanian micro-borrowers. This was important because, while energy poverty is a context-specific problem, there is no general consensus on the influence of microfinance on the decrease in energy poverty around the world (Kumar, 2020). The findings are also crucial for policymakers working to alleviate energy poverty among the poor.

Specifically, the objectives of this chapter are to determine micro-borrowers' willingness and ability to use modern energy sources, as well as to investigate the relationship between micro-borrowers' willingness and ability to spend on contemporary energy sources and their use of contemporary energy sources. The chapter also looks into the impact of micro-borrowers' demographic characteristics (age, marital status, level of education, and household size) on their use of contemporary energy sources.

23 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

www.igi-global.com/chapter/microfinance-energy-poverty-and-sustainability/298744

Related Content

"Airpocalypse" or Tsar Economic China: Analysis of Unsustainable Environment and Reason Behind Increased Global Warming

Fauzia Ghaniand Komal Ashraf Qureshi (2018). *Promoting Global Environmental Sustainability and Cooperation* (pp. 137-161).

www.irma-international.org/chapter/airpocalypse-or-tsar-economic-china/205738

Assessing Performance of Leaf Area Index in a Monitored Mountain Ecosystem on Mount Elgon-Uganda

Tonny Oyana, Ellen Kayendekeand Samuel Adu-Prah (2019). *Environmental Information Systems: Concepts, Methodologies, Tools, and Applications* (pp. 791-808).

www.irma-international.org/chapter/assessing-performance-of-leaf-area-index-in-a-monitored-mountain-ecosystem-on-mount-elgon-uganda/212969

Neuro-Psychological Approaches for Artificial Intelligence

Suhani Dheer, Satvik Tripathiand Edward Kim (2023). *Multidisciplinary Approaches in AI, Creativity, Innovation, and Green Collaboration* (pp. 29-43).

www.irma-international.org/chapter/neuro-psychological-approaches-for-artificial-intelligence/322870

A Feature Selection-Based Method for an Ontological Enrichment Process in Geographic Knowledge Modelling

Mohamed Farah, Hafedh Nefziand Imed Riadh Farah (2019). *Environmental Information Systems: Concepts, Methodologies, Tools, and Applications* (pp. 349-368).

www.irma-international.org/chapter/a-feature-selection-based-method-for-an-ontological-enrichment-process-in-geographic-knowledge-modelling/212950

Case Study: Benchmarking Climate Change Resilience at Organizational, Community, and Sectoral Levels

(2018). *Innovative Strategies and Frameworks in Climate Change Adaptation: Emerging Research and Opportunities* (pp. 38-58).

www.irma-international.org/chapter/case-study/191157