

Tiruwork Arega, Dawit Mekonnen and Claudia Ringler

International Food Policy Research Institute

Introduction

- Electricity is a key investment for transforming rural development and societal welfare.
- Gradual electricity expansion provide access to 33% rural towns and villages
- Rural electricity access has two forms
 - Village level access
 - Household level access
- The gendered welfare impacts of such expansion is not well documented

→ Examine the impacts of village and household level electrification on children schooling, non-farm income, and key women empowerment indicators

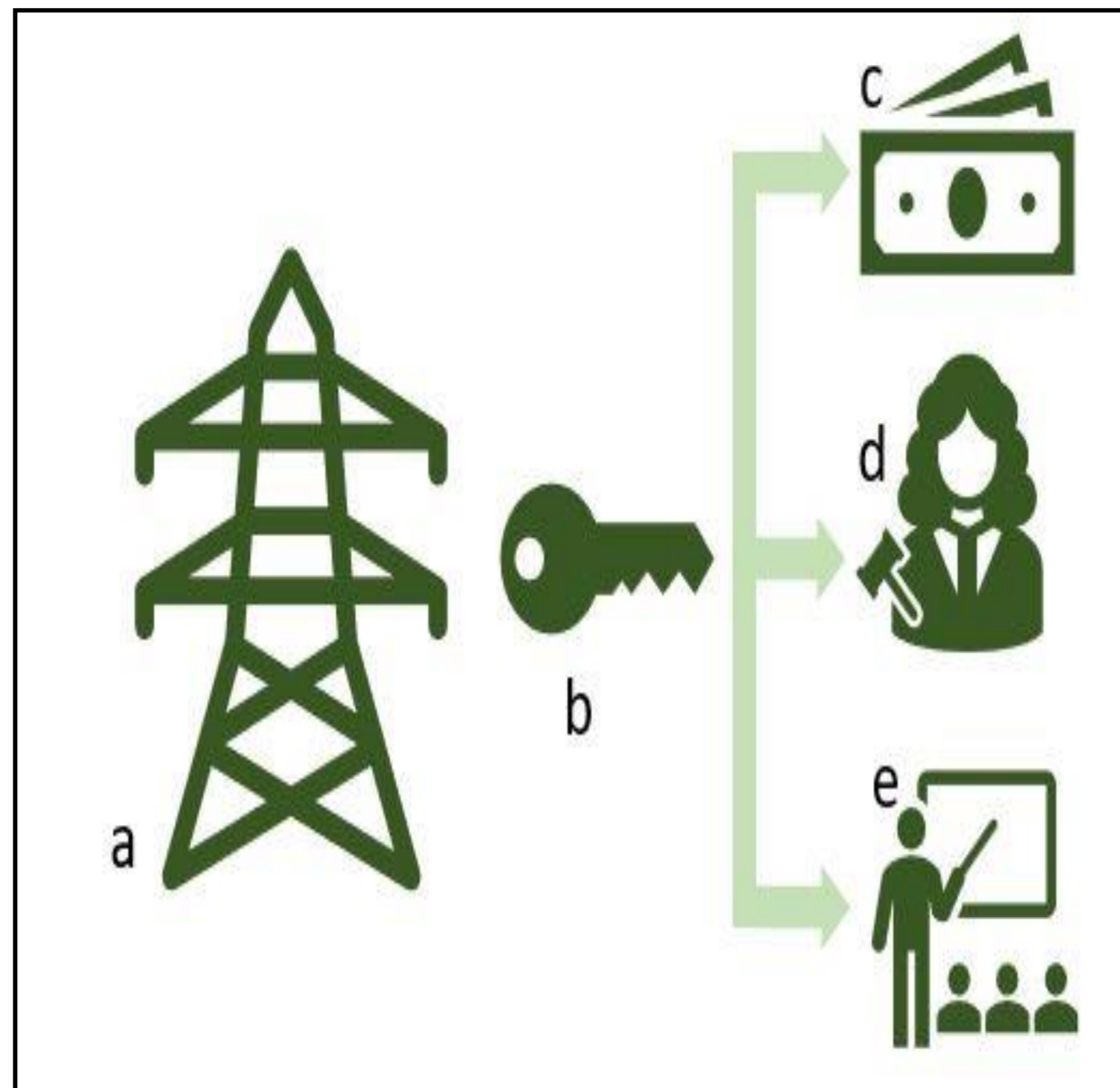
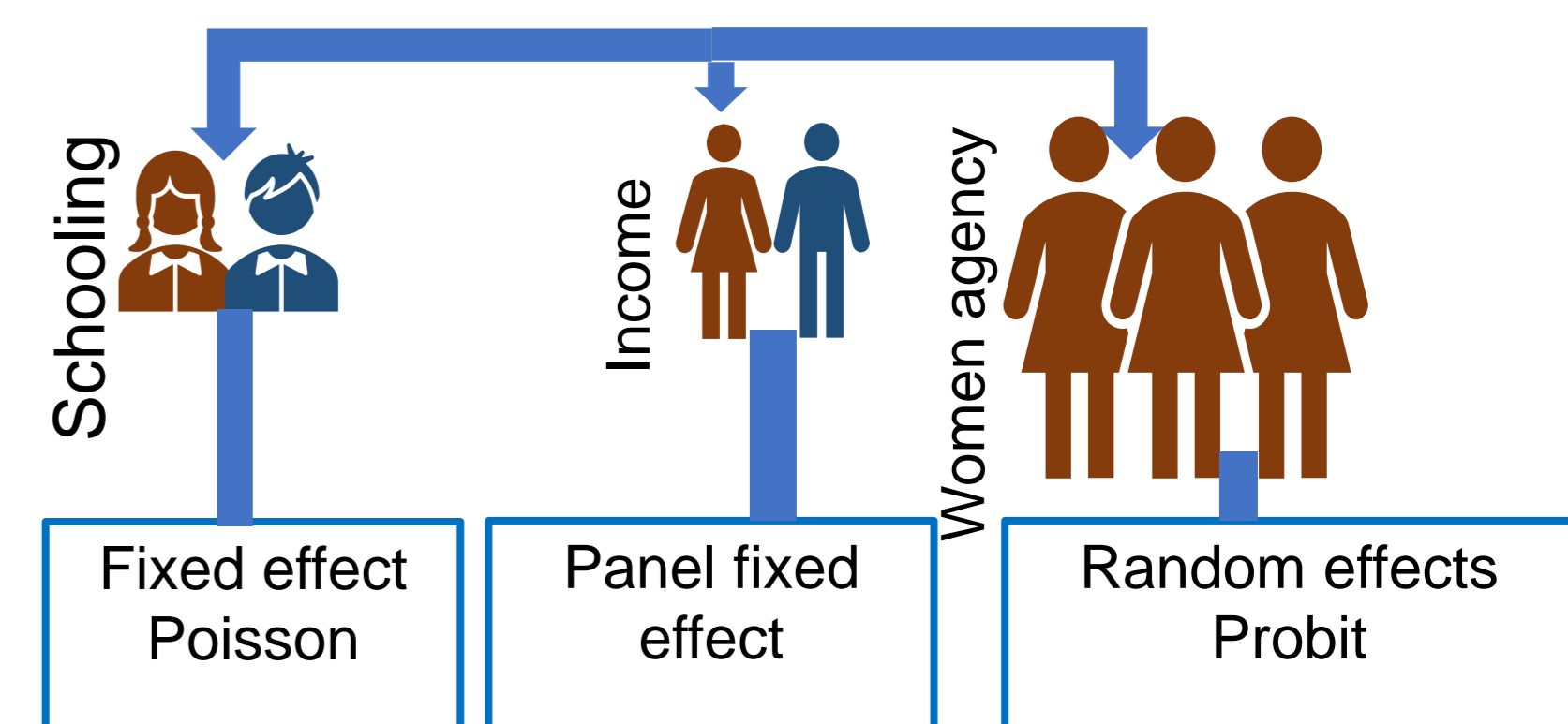


Fig 1: a) Electricity access b) unlock opportunities c) non-farm income d) empowerment e) education

Methods

- Three rounds of panel data collected in 2012, 2016 & 2019 from
 - 1,881 household
 - 127 Villages



→ All the equations are run separately for household-level and village-level access to electricity.

Results

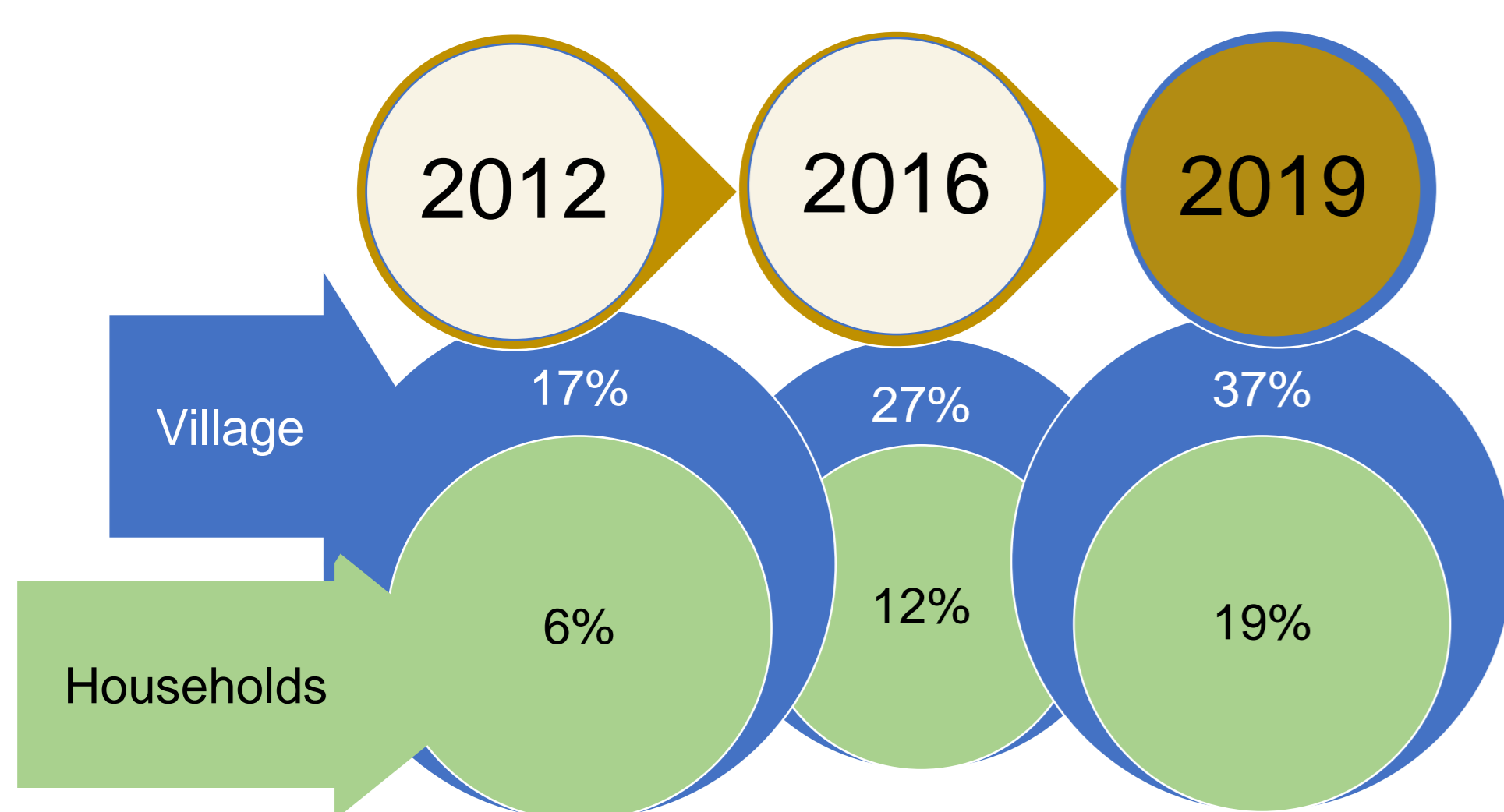
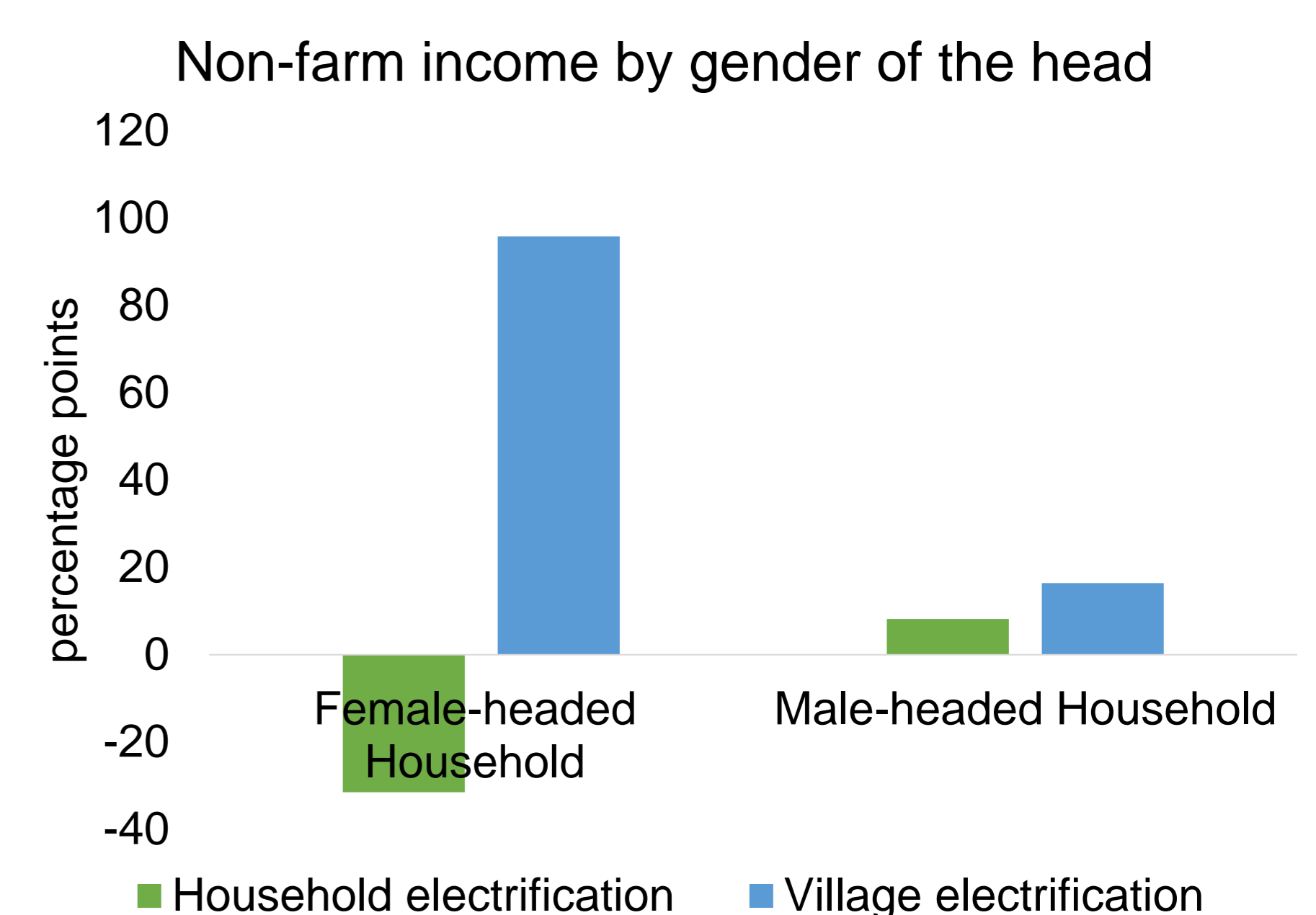


Fig 2: Village and household level electrification across the survey years

Key highlights

- Female-headed households are better at channeling village electrification into the operation of small business.
- School-age girls benefit from **shift daytime domestic duties** to the evening, and **reduced fuel collection time**
- Household-level electricity improve women agency, access, and control over resources within the household.

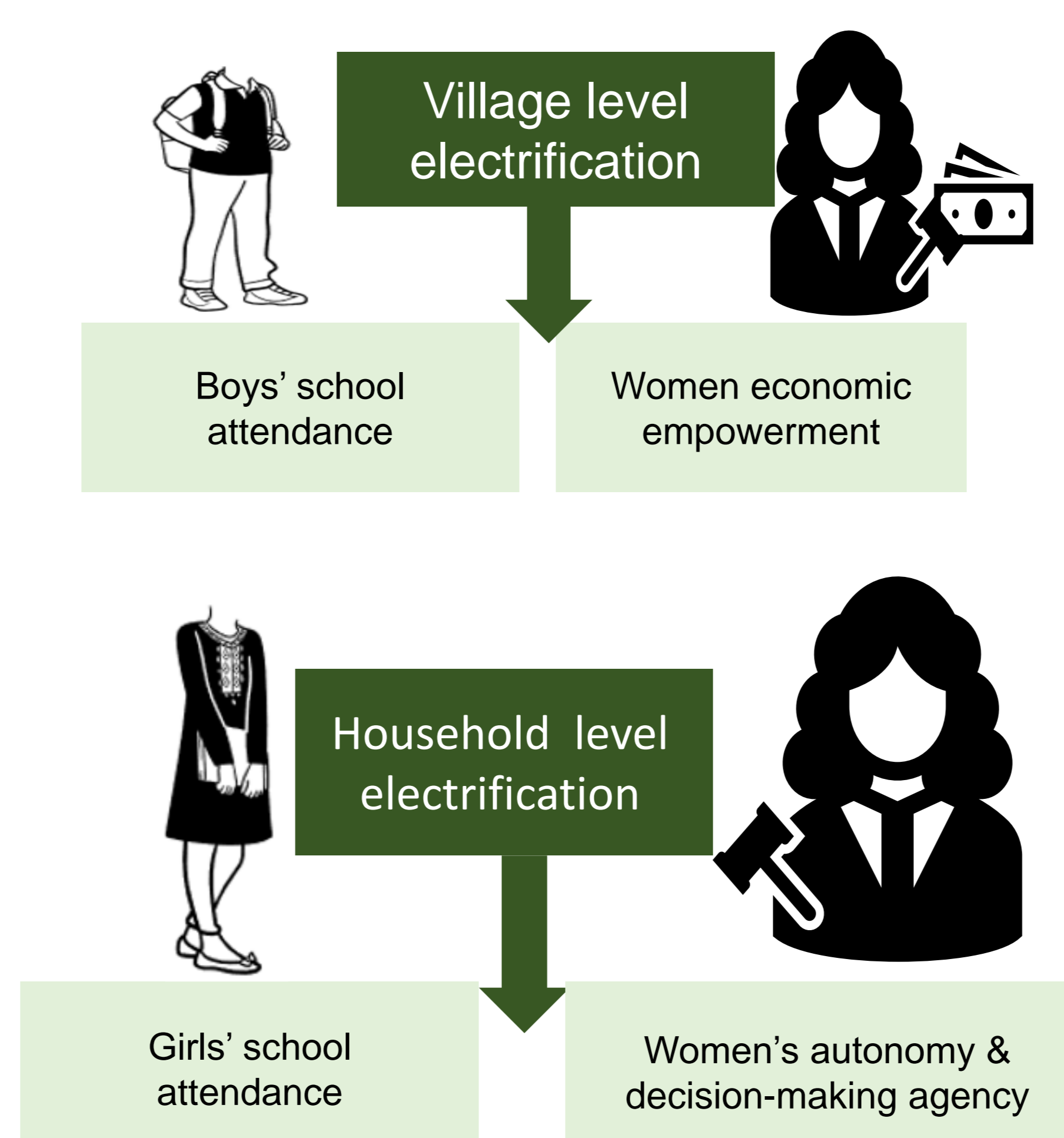
Results



Results

- Women decision making agency on cash crop farming & non-farm activities, and control equipment promoted by household level connection
- Village-level electrification doesn't benefit girls' education and adult women's agency
- Village electrification has a greater spillover effect on boys' years of schooling completed.
- Women-headed household indicate a robust ability to translate village-level electricity into economic opportunities.

Gendered?



Concluding remarks

- The level of electrification highlight remarkable gender dimension
- Only electricity access at home improved girls' education and women's agency
- Even in electrified villages, responding to the specific needs of girls and women requires **targeted and supplementary investments**.
- Gender-specific energy needs should be considered when planning rural electricity infrastructure.

Acknowledgements:

This work was carried out under the CGIAR NEXUS Gains Initiative, which is grateful for the support of CGIAR Trust Fund contributors: www.cgiar.org/funders.