



## project facts

### Key words

Platform use, Climate change, smallholder farmers, Climate adaptation, Sustainable livelihoods, Farming practices

### Behavioral themes

Platform use  
Technology adoption

### Research design

Longitudinal quantitative study using difference in difference analysis

### Scope

**Start date:** July 2022

**End date:** May 2024

**Participants:** Farmers in Makueni and Tharaka Nithi counties

**Sample size:** 392 farmers

### Location

Makueni and Tharaka Nithi Counties in Kenya

### Partner

Vestegaard running the GroR platform for marketing farm produce

### Ethics approval

Inclusive IRB Review

# Can digital platforms help improve farmer livelihoods?

Understanding how platform use in smallholder farmers can contribute to sustainable livelihoods, and how modern farming practices can increase harvest income for smallholder farmers.

## Background: Effect of platform use on farmer livelihoods

We collected data across 2 harvest seasons, from 2022 to 2023 from farmers primarily growing beans and cowpeas. The study focussed on farmers who used the digital platform, GrOR, an agritech platform where farmers can buy inputs and sell their crops, as the treatment, and farmers who did not use platforms at all as the control and compared their incomes, harvests, and farming practices across 2 years. The survey included 392 farmers.

## Conducting the research

The study used mixed methods, starting with an initial qualitative survey then followed by a baseline and endline qualitative study. We used a difference-in-difference approach to analyze changes in income and harvests across the 2 harvest seasons.



- » Platformed farmers did not earn or harvest significantly more than unplatformed farmers, but platforms presented a ready market for farmers and helped them sell more over produce over time. Interestingly, there was a marginally significant convergence of crop revenue between male and female on-platform farmers. Female farmers grew their income from Kes 18,218 to Kes 27,964 in the midline while male on-platform farmers' crop revenue remained largely significantly unchanged from Kes 25,231 to Kes 27,013.
- » The study also found that platform use motivated farmers to sell more of their produce. The proportion of harvest sold increased by 8% among on-platform farmers, while off-platform farmers saw a decrease of 13% in the proportion of harvest sold. Although farmers, regardless of platform use, exhibited similar levels of confidence in price negotiations and relied on comparable sources for crop price information, those on the platform ended up selling more. This suggests that a consistent market provided by the platform was a key factor in encouraging farmers to sell a greater quantity of their produce.

## Implications

### For practitioners:

Platforms by themselves may not be enough to boost earnings. They do however serve as aggregators of a largely informal small holder farmer segment. They can therefore be useful delivering value added services.

Platform use could be especially effective in improving livelihoods of female farmers.

## Recommendations for future research

Future research should probe other income-earning activities farmers do to earn a living between harvest seasons. To better understand farmers' livelihoods, further research should probe income-earning activities farmers do to earn a living between harvest seasons. Further research should also integrate the effects of climate change into their assessment of market access and farmer resilience.

## Further reading

Abioye, Oyewale & Popoola, Olufemi & Akande, Adebowale & Fadare, David & Omitoyin, Siyanbola & Yinusa, Babatunde & Kolade, Olayinka. (2024). Farmers' willingness to adopt digital application tools in Ogun State, Nigeria. *Journal of Strategy and Management*. 10.1108/J SMA-06-2023-0135.

Omulo, Godfrey & Mensah Kumeh, Eric. (2020). Farmer-to-farmer digital network as a strategy to strengthen agricultural performance in Kenya: A research note on 'Wefarm' platform. *Technological Forecasting and Social Change*. 158. 120-120. 10.1016/j.techfore.2020.120120.

Omache, N. R. (2016). Factors influencing agricultural productivity in Kenya: A case of Nyathuna Ward in Kabete Sub-County, Kiambu County (Master's thesis, University of Nairobi). University of Nairobi eRepository. <https://erepository.uonbi.ac.ke/handle/11295/97573>.

## Study team

Suleiman Amanela, Varsha Ashok, Joseph Dalley, Camilla Manyasi, James Ogada, Glenn Ogolah, Shamim Rashid

### To cite:

Busara. 2025. *Can digital platforms help improve farmer livelihoods?* (The aha! moment No. 15). Nairobi: Busara. DOI: [doi.org/10.62372/MTPM7638](https://doi.org/10.62372/MTPM7638)

The aha! moment summarises key facts and insights from Busara's research projects.

*Disclaimer: The views presented in this publication are those of the author(s) and do not necessarily reflect the positions of funders or partners. ©Busara 2025.*

38 Apple Cross Road, Nairobi, Kenya [www.busara.global](https://www.busara.global)