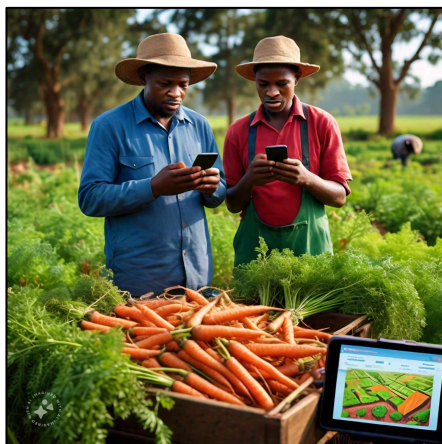




Digital transformation of smallholder agriculture: Enrolment of smallholder farmers into global production and marketing paradigms



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Background

- South Africa is increasing focus on agriculture digitalisation to drive transformation to address the historical neglect of smallholder farmers (SHFs).
- However, evidence from past agricultural transformations showed that new technologies were often ill-fitted and failed to benefit SHFs in Africa hence concerns that digitalisation will only benefit the largescale farmers and corporations extending their control and dominance over SHFs.
- This would diminish SHFs' ability to make autonomous decisions regarding their farming paradigms.
- To contribute to this body of knowledge, this research critically examined the ways in which mobile apps are transforming agriculture for SHFs in South Africa.



Methodology

- The multiple case study methodology guided by the critical theory of technology and self-determination theory was used.
- Four mobile apps, forty-two SHFs using the apps and four mobile app administrators were purposively selected.
- Data analysis was conducted using Atlas.ti.
- Themes were generated from the literature review and from the data

Food safety certifications like Global Gap and Local Gap provide huge operational value [...] At [the Farming Inputs App] our minimum requirement is Local Gap or Global Gap [...] Food Safety is one of our top priorities, and we encourage more farmers to go through with their compliance.

(Farming Inputs App website, 2 November 2022)



Findings

- Corporate-backed mobile apps enrol SHFs into high-input production paradigms such as Good Agricultural Practices (GAP), which require costly inputs and skills SHFs often lack.
- This enrolment, despite the mismatch with SHFs' capabilities, undermines the autonomy and competence of SHFs.
- Furthermore, SHFs are not provided with a conducive external environment, such as infrastructure, transport and financial resources which are required for them to fully benefit from the agriculture digitalisation efforts.

Conclusion

- Hence this study puts forward that to truly empower SHFs, there must be a fundamental shift in digitalisation efforts, prioritising their interests by either creating an enabling external environment for them to succeed within these new production paradigms.
- Alternatively, SHFs could be supported within their existing contexts, rather than subjecting them to systems where they lack adequate resources to thrive.