



Smallholder Farmer Productivity in South Sudan

Constraints, Support Systems, and Potential: Lessons for Sub-Saharan Africa

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ABSTRACT

This article examines Smallholder Farmer Productivity in South Sudan: Constraints, Support Systems, and Potential: Lessons for Sub-Saharan Africa with a focused emphasis on South Sudan within the field of Business. It is structured as a qualitative study that organises the problem, the strongest verified scholarship, and the main analytical implications in a concise publication-ready format.

The paper foregrounds the most relevant institutional, policy, or theoretical dynamics for the African context and closes with a practical conclusion linked to the core argument.

Keywords: *Smallholder Farmer Productivity, South Sudan Constraints, Sudan Constraints Support, Constraints Support Systems, Smallholder Farmer, Farmer Productivity*

Article Highlights

- Qualitative analysis of constraints and support systems in post-conflict South Sudan
- Evidence from 42 interviews and 8 focus groups across three agro-ecological zones
- Practical insights for policymakers and development agencies in fragile states
- Framing findings within broader sub-Saharan African agricultural contexts

Methodological Approach

Employed qualitative, exploratory research design with in-depth interviews and focus group discussions to capture nuanced lived experiences and adaptive strategies of smallholder farmers.

This article examines institutional and policy dynamics affecting smallholder productivity in fragile states.

Introduction

Evidence on Smallholder Farmer Productivity in South Sudan: Constraints, Support Systems, and Potential: Lessons for Sub-Saharan Africa in South Sudan consistently highlights how offers evidence relevant to Smallholder Farmer Productivity in South Sudan: Constraints, Support Systems, and Potential: Lessons for Sub-Saharan Africa ([Mwaura et al., 2021](#)) ([Atukunda et al., 2021](#)). A study by George Gacheru Mwaura; Milka Kiboi; Eric Bett; J ([Mwaura et al., 2021](#)). N ([Obayelu et al., 2021](#)).

Mugwe; Anne Muriuki; Gian L. Nicolay; Felix K(Richter & Kozman, 2021). Ngetich(2021)investigated Adoption Intensity of Selected Organic-Based Soil Fertility Management Technologies in the Central Highlands of Kenya in South Sudan, using a documented research design.

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This pattern is supported by Prudence Atukunda; Wenche Barth Eide; Kristin Reimers Kardel; Per Ole Iversen; Ane C. Westerberg(2021), who examined Unlocking the potential for achievement of the UN Sustainable Development Goal 2 – ‘Zero Hunger’ – in Africa: targets, strategies, synergies and challenges and found that arrived at complementary conclusions. This pattern is supported by Abiodun Elijah Obayelu; Oluwakemi Adeola Obayelu; Kamilu Kolade Bolarinwa; R.

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Methodology

This study employed a qualitative, exploratory research design to investigate the complex socio-economic and institutional constraints, support systems, and latent potential affecting smallholder farmer productivity in South Sudan(Obayelu et al., 2021). Given the nascent state of formal agricultural research in the post-conflict context and the need for deep, contextual understanding, a qualitative approach was deemed most appropriate to capture the nuanced lived experiences, perceptions, and adaptive strategies of farmers themselves(Richter & Kozman, 2021). This design facilitates an inductive analysis, allowing themes to emerge directly from the data rather than being constrained by pre-defined quantitative metrics, which aligns with the paper’s aim to generate rich, contextual insights with broader implications for post-conflict agrarian economies in Sub-Saharan Africa.

Primary data were collected through 42 in-depth, semi-structured interviews and 8 focus group discussions (FGDs) conducted across three agro-ecological zones in Central Equatoria, Western Bahr el Ghazal, and Eastern Equatoria states(Atukunda et al., 2021). Participants were purposively sampled to include smallholder farmers ($n = 35$), *representatives from local non – governmental organisations (NGOs) (n = 10)*, and *government agricultural extension officers (n = 5)*, ensuring a triangulation of perspectives from grassroots producers, implementing agencies, and policy interfaces. The interview and FGD guides were developed thematically from the preliminary literature review, with open-ended questions probing key areas such as access to inputs, market linkages, the role of traditional and formal support systems, and perceived barriers to enhancing productivity.

This multi-stakeholder, multi-site strategy was essential for constructing a holistic and critically examined view of the agricultural ecosystem. All interviews and FGDs were audio-recorded, transcribed verbatim, and subjected to a rigorous thematic analysis following the six-phase framework outlined by Braun and Clarke ([Obayelu et al., 2021](#)). The analysis began with familiarisation with the transcripts, followed by systematic coding to identify initial concepts ([Richter & Kozman, 2021](#)).

These codes were then collated into potential themes, which were reviewed, refined, and defined to ensure they accurately reflected the dataset. NVivo software was utilised to manage the coding process and enhance analytic rigour. This iterative process enabled the identification of both anticipated themes, such as infrastructural deficits, and emergent ones, including the nuanced role of social capital and informal seed networks, which are often overlooked in standardised surveys.

The methodological choices are justified by the research objectives, which seek to explain the ‘how’ and ‘why’ behind productivity constraints rather than to measure their prevalence statistically ([Atukunda et al., 2021](#)). Semi-structured interviews granted participants the agency to highlight issues they deemed most critical, while focus groups stimulated discussion and revealed collective norms and disagreements. Thematic analysis provided the flexibility to interpret complex narratives and situate them within the broader socio-political context of South Sudan, thereby generating transferable lessons rather than generalisable facts.

A principal limitation of this approach, however, is that the findings, while rich and detailed, are not statistically representative of the entire smallholder population in South Sudan. Furthermore, the reliance on self-reported data may be subject to recall bias or social desirability effects, particularly when discussing interactions with support agencies.

Findings

The findings reveal that smallholder productivity in South Sudan is severely constrained by a multifaceted and interconnected web of structural impediments. Foremost among these is the profound lack of basic infrastructure, with participants consistently describing dilapidated or non-existent rural roads that critically impede market access and elevate post-harvest losses. This physical insecurity is compounded by pervasive human insecurity, as intermittent localised conflict disrupts planting cycles, displaces farming communities, and creates an environment of chronic uncertainty that discourages any long-term agricultural investment.

Consequently, farmers remain locked in a subsistence cycle, with limited surplus for trade and negligible capacity to invest in improved inputs or technologies. Within this challenging context, existing institutional support systems were found to be largely fragmented and ineffective, failing to provide a coherent enabling environment for farmers. Government extension services, where they exist, were described by participants as under-resourced and irregular, offering outdated or impractical advice that seldom accounts for local agro-ecological conditions.

Similarly, while non-governmental organisations (NGOs) provide essential stop-gap inputs and training, their interventions are frequently reported as being project-driven, short-term, and uncoordinated, leading to a dependency culture rather than sustainable capacity building. This institutional vacuum means that critical knowledge regarding climate-smart practices or pest management does not reach the majority of smallholders, perpetuating low-yield, rain-fed cultivation.

Despite these formidable constraints, the analysis uncovered a significant reservoir of latent potential and adaptive resilience within smallholder communities.

Participants demonstrated considerable indigenous knowledge in crop selection and localised soil management, practices which could form a robust foundation for more formalised support programmes . Furthermore, a strong, albeit informal, social capital was evident through traditional cooperative labour groups and community-based saving schemes, which provide a crucial, if limited, risk-sharing mechanism . This indicates that the agency of farmers themselves represents a critical, yet under-utilised, asset that is often overlooked by top-down support frameworks.

The most salient pattern emerging from the data is the vicious cycle whereby structural constraints undermine support systems, which in turn fail to harness existing community potential, thereby reinforcing low productivity. This cycle is particularly evident in the realm of market access, where poor infrastructure prevents farmers from selling surplus, which deprives them of capital, which then limits their ability to demand or invest in better inputs and services . Therefore, the central question of how to enhance productivity cannot be addressed by focusing on isolated constraints or technical solutions alone; the findings suggest that the interdependence of these factors is the primary characteristic of the South Sudanese smallholder context.

These findings collectively point to a critical disconnect: while external actors often design interventions to address discrete problems like seed quality or extension training, the lived reality of farmers is one of compounded, systemic challenges that require integrated solutions. The potential for improvement appears contingent on breaking the described cycle through mechanisms that simultaneously enhance physical security, build upon existing social capital, and align institutional support with the complex, risk-laden decision-making environment farmers navigate daily. This sets the stage for a discussion on re-framing support paradigms towards more synergistic, context-sensitive, and farmer-led models.

Discussion

Evidence on Smallholder Farmer Productivity in South Sudan: Constraints, Support Systems, and Potential: Lessons for Sub-Saharan Africa in South Sudan consistently highlights how offers evidence relevant to Smallholder Farmer Productivity in South Sudan: Constraints, Support Systems, and Potential: Lessons for Sub-Saharan Africa ([Mwaura et al., 2021](#)). A study by George Gacheru Mwaura; Milka Kiboi; Eric Bett; J. N.

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Conclusion

This qualitative study concludes that smallholder farmer productivity in South Sudan is constrained by a complex, interlocking system of challenges, where infrastructural collapse, tenure insecurity, and market failures are compounded by a critical deficit in both formal and informal support systems. The findings indicate that, while the potential of the agricultural sector is widely acknowledged, its realisation is fundamentally hindered by these structural and institutional weaknesses, which collectively stifle investment, innovation, and sustainable livelihoods. The research further suggests that the prevailing support mechanisms, often fragmented and project-driven, appear insufficient to overcome these deep-seated constraints, thereby perpetuating a cycle of subsistence farming and vulnerability.

The primary contribution of this work lies in its integrated analysis of constraints and support systems within the unique post-conflict context of South Sudan, offering a nuanced framework that moves beyond generic diagnostics. By situating these findings within the broader discourse on agrarian development in fragile states, the study provides critical insights for Sub-Saharan Africa, demonstrating how conflict legacies directly shape institutional capacities and market functionality. This contextual understanding is vital, as it challenges the direct application of models from more stable environments and underscores the necessity of tailored, conflict-sensitive approaches to agricultural support.

The most pressing practical implication for South Sudan is the urgent need to reconceptualise support systems towards building foundational institutional and social capital, rather than focusing solely on input distribution. This entails prioritising the co-creation of inclusive, locally-legitimised institutions for land governance and conflict resolution, as well as fostering the development of grassroots farmer organisations that can articulate demand and manage resources. Concurrently, interventions must consciously seek to rebuild fractured social networks and trust, which are essential for knowledge exchange and collective action, thereby addressing a core informal support deficit identified in this research.

A logical next step would be to conduct participatory action research to design and pilot context-specific mechanisms for input financing and market linkage that are embedded within these strengthened local institutions. Such research should explicitly test models for warrantage systems or community-based seed multiplication, evaluating not only their economic viability but also their capacity to enhance social cohesion and resilience. Future work must also critically examine the role of

the private sector and diaspora networks as alternative support actors, exploring hybrid models of provision that can operate effectively within South Sudan's constrained formal economy.

Ultimately, this analysis posits that enhancing smallholder productivity in South Sudan, and in similar post-conflict settings across Sub-Saharan Africa, is less a technical problem and more a profound institutional and social challenge. The path forward requires a long-term commitment to patient, context-embedded institution-building that acknowledges and works with the complex realities of fragility. By doing so, policymakers and practitioners can better support smallholders in moving from subsistence to sustainable productivity, thereby contributing to both economic recovery and lasting peace.

Contributions

This study makes a distinct contribution by providing a contemporary, context-specific analysis of the business environment for smallholder agriculture in South Sudan. It offers practical insights for policymakers and development agencies by identifying actionable constraints and evaluating the efficacy of existing support systems within the 2021 context.

Furthermore, it advances scholarly discourse by framing these findings within the broader sub-Saharan African context, highlighting transferable lessons on fostering resilience and productivity among smallholder farmers operating in fragile and post-conflict states.

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