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Promises and pitfalls: Small-scale farmers' perspectives on market access initiatives in Jozini, South Africa

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Abstract

Small-scale farmers remain systematically excluded from formal markets due to a combination of structural constraints, such as inadequate infrastructure, poor institutional support, and asset-related vulnerabilities that limit their ability to compete. Despite numerous public and private interventions designed to improve market access, these initiatives often fail to address the complexity of farmers' challenges and their long-term impact. This study critically examines market access interventions affecting the participation of small-scale producers in the Jozini Local Municipality, a socio-economically marginalized rural area in northern KwaZulu-Natal (KZN), South Africa, to determine whether they effectively reduce systemic barriers or reproduce inequalities. Guided by the asset vulnerability analytical framework (AVAF),

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Conflict of Interest
The authors declare no conflict of interest.

this study examines the relevance, implementation, and sustainability of these interventions. We used focus-group discussions and semi-structured interviews to investigate how farmers experience and interpret interventions aimed at improving market participation. The findings reveal widespread dissatisfaction with many programs due to poor implementation, limited reach, lack of coordination, inadequate maintenance, insufficient training, and weak communication. These shortcomings continue to limit farmers' ability to accumulate and effectively utilize physical, financial, and human assets, thereby reinforcing existing vulnerabilities. While the AVAF has been widely used to analyze livelihood and climate-related vulnerabilities in the region, its explicit use in examining market access interventions targeting small-scale farmers appears limited. This study, therefore, extends the application of the AVAF by examining how market access interventions shape producers' asset vulnerabilities and market participation from their perspectives. The study concludes that, while multiple market access interventions are present in the Jozini Local Municipality, they have not yielded meaningful improvements in farmers' participation in formal markets and are therefore unlikely to reduce vulnerability. The study notes that market access interventions in highly marginalized rural contexts are unlikely to reduce vulnerability unless they move beyond fragmented, project-based delivery toward institutionally coordinated, accountable, and context-responsive strategies that support sustained asset accumulation and meaningful integration into formal markets.

Keywords
asset vulnerability analytical framework (AVAF), agricultural interventions, asset vulnerability, market access, rural livelihoods, small-scale farmers

Introduction

Agriculture plays a crucial role in rural development and the sustenance of rural livelihoods, serving as the backbone of food security in South Africa, particularly in rural areas where it significantly contributes to economic growth and employment (Mokgomo et al., 2022). Globally, the Food and Agriculture Organization of the United Nations (FAO, 2022) estimates that 1.3 billion people engage in agriculture, with 97% residing in developing countries; among these, approximately 400 million rely on small-scale farming for their livelihoods. These global patterns are reflected in southern Africa, where small-scale agriculture remains central to rural livelihoods yet is persistently characterized by limited integration into formal markets. The Jozini Local Municipality exemplifies these dynamics, as small-scale producers operate in structurally constrained rural economies marked by weak infrastructure, high poverty levels, and uneven access to market-supporting assets. Small-scale farming is therefore central not only to ensuring household food security but also to shaping broader patterns of rural poverty, resilience, and local economic functioning. By providing households with both subsistence and marketable produce, it contributes to income generation and poverty alleviation. Moreover, it enhances resilience by enabling households to cope with economic and environmental shocks through diversified production strategies. Moreover, small-scale farming underpins local economic functioning by sustaining rural markets, facilitating employment opportunities, and supporting the circulation of goods and services in local value chains.

In South Africa, the agricultural sector contributes approximately 3% to the national gross domestic product (GDP), accounts for about 40% of export revenues, and provides roughly 4.6% of employment (KwaZulu-Natal Department of Agriculture and Rural Development, 2023). More importantly for rural development debates, it serves as the backbone of rural livelihoods, where a large proportion of households depends on small-scale farming as their primary income (Mbatha & Masuku, 2018). This reliance is particularly pronounced in provinces such as KwaZulu-Natal, where small-scale farming underpins household subsistence, food security, and coping strategies in the face of high unemployment and persistent poverty (Nhlozi, 2023).

Situated in the northernmost part of the uMkhanyakude District, the Jozini Local Municipality illustrates these dynamics. Classified among South Africa's poorest municipalities, Jozini rec-

ords poverty levels above 70% and youth unemployment rates exceeding 55% (Simelane, 2017; Statistics South Africa, 2022). Approximately 80% of households in this predominantly rural municipality engage in agriculture, combining crop cultivation and livestock production (Buthelezi, 2021). These activities frequently represent the sole income source for vulnerable groups such as women-headed households, the elderly, and unemployed youth (Wale & Mkuna, 2025). However, despite its importance, small-scale farming in Jozini remains largely subsistence-based, relying on traditional and labor-intensive methods, such as manual ploughing, hand sowing and weeding, small-scale irrigation with rudimentary tools, and limited mechanization. These methods, while culturally embedded, constrain productivity and exacerbate vulnerability to structural and environmental pressures, including unpredictable rainfall, soil fertility decline, and restricted access to modern agricultural inputs.

Small-scale producers in South Africa face a plethora of challenges that impede productivity and income generation. These include limited access to land and irrigation, insufficient financial and technological resources, labor constraints, and vulnerability to environmental shocks such as erratic rainfall and soil degradation. In this broader context, access to formal markets is particularly constrained. Empirical research (Agholor et al., 2023; Lantz, 2019; Mpandeli & Maponya, 2014) documents the barriers that constrain small-scale farmers' access to formal markets. Mpandeli and Maponya (2014), through surveys and focus group-based research in Limpopo, found that limited market information, high input prices (such as fertilizers), inadequate irrigation, high transportation costs, and natural constraints were major impediments to production. On the other hand, Lantz (2019), drawing on peer-reviewed literature in economics and agricultural sciences, found that stringent agro-food market requirements, technological limitations, information asymmetries, high transaction costs, inadequate infrastructure and inputs, limited government support, and unequal land distribution restrict farmers' participation in growth and trade opportunities. Complementing these findings, Agholor, Ogujiuba, and Shongwe (2023), using structured and semi-structured questionnaires, found that high transportation costs and inadequate market information limit market participation, while factors such as age and gender further exacerbate market exclusion. Collectively, these studies illustrate a convergence of physical, financial, institutional, and socio-demographic factors that collectively impede market integration for small-scale farmers, highlighting the multifaceted nature of market access constraints and the need for integrated, context-sensitive interventions.

Farmers in Jozini face enduring barriers when accessing formal markets, including infrastructural deficiencies, logistical constraints, and limited institutional support. Underdeveloped roads, fragmented value chains, and insecure land tenure compound these challenges, while socio-demographic factors such as youth outmigration and limited knowledge transfer restrict continuity and innovation (Avudufu, 2022; Dhilon & Moncur, 2023; Ndlovu & Masuku, 2021)). Adverse environmental conditions, including erratic rainfall and climate change, primarily reduce crops and livestock yields (Maziya, 2023; Mkhize, 2018). These biophysical constraints are compounded by structural and institutional barriers that directly impede access to formal markets. Socio-demographic factors, such as youth outmigration and limited knowledge transfer, further exacerbate these vulnerabilities. Collectively, these factors constrain productivity, undermine income security, and limit pathways into formal markets.

In response, various public-sector interventions have been implemented to reduce market access constraints. In Jozini, such measures include infrastructure investments such as the Value-Adding Center (JVAC), for processing and storage facilities; the Department of Agriculture and Rural Development's (DARD) "dam and dip" initiatives aimed at improving irrigation and livestock health; the Poverty Eradication and Sustainable Income (PESI) grant program; mechanization support by providing tractors and farming equipment; and market connection efforts such as the DARD-facilitated Hello Choice Market (KZN-DARD, 2023). These programs are designed to enhance farmers' production capacities, reduce post-harvest losses, and link producers to formal markets.

Existing evaluations and reports, however, suggest a persistent gap between policy intentions and on-the-ground outcomes. Farmers report mismanagement, underutilized infrastructure, dysfunctional equipment, and inconsistent delivery of promised support. While some initiatives have shown potential, their reach is limited by inadequate training, weak follow-through, and a lack of sustained institutional backing. Previous scholarship (Khambule, 2025; Matisson, 2024: Mfikili, 2023; Shapland et al., 2021) documents phenomena such as elite capture, administrative bottlenecks, and implementation failures in South African rural development programs, but these accounts are often drawn from program reports or macro-level evaluations and do not always reflect the lived experiences of intended beneficiaries.

It is this distinction between what program documentation and macro evaluations report and what beneficiary communities actually experience that motivates the present study. While existing literature (Agholor et al., 2023; Hlatshwayo et al., 2021; Ndlovu & Masuku, 2023) provides important descriptions of barriers and catalogues of interventions, a few related gaps remain apparent. First, numerous studies (Ndlovu & Masuku, 2021; Olabanji & Chitakira, 2025) evaluate market access interventions from a program or policy perspective (outputs, budgets, infrastructure), whereas few studies foreground the perceptions and lived realities of small-scale farmers themselves, particularly in deeply marginalized municipalities such as Jozini. Second, there is limited empirical evidence on whether interventions actually disrupt structural inequalities or reproduce them by privileging better-resourced households or local elites. Third, while asset-based approaches emphasizing physical, financial, human, social, and natural capital are well established in development theory (Chatsiwa, 2025; Ntsiapane et al., 2023; Skhosana, 2021), their use as an evaluative lens for assessing market access initiatives at the local level remains limited in empirical studies of South African rural interventions.

This study, therefore, addresses these gaps by centering on small-scale farmers' perceptions of such interventions in Jozini and applying the asset vulnerability analytical framework (AVAF) (Moser, 1998, 2021) as an interpretative and analytical tool. By examining how deficiencies across physical, financial, human, social, and natural assets mediate farmers' abilities to access and benefit from interventions, the study connects microlevel experiences to broader questions of policy effectiveness and equity. Empirically, the study draws on qualitative data collected from small-scale farmers in Jozini, prioritizing their narratives, evaluations, and strategies, to offer a place-based, farmer-centered account of how market access initiatives perform in practice.

In doing so, the study contributes in various interrelated ways. Empirically, it supplies new, contextually grounded evidence on beneficiary perceptions in a municipality that is underrepresented in the evaluation literature. Theoretically, it demonstrates the value of deploying an asset-vulnerability lens to interrogate whether interventions ameliorate or exacerbate structural inequalities. Practically, the study produces policy-relevant insights about the design, targeting, and governance of market-access initiatives, emphasizing the importance of participatory, asset-sensitive, and longitudinal approaches to program delivery and monitoring. Ultimately, the study aims to critically interrogate market-access interventions targeting small-scale farmers in Jozini Local Municipality to assess whether these interventions alleviate market-related vulnerabilities or reproduce existing patterns of exclusion. The study specifically seeks to:

(1) examine how small-scale farmers experience and interpret market access interventions in practice;
(2) analyze how asset deficiencies shape farmers' capacity to benefit from these interventions; and
(3) evaluate the implications of these dynamics for equitable market participation.

Theoretical Framework

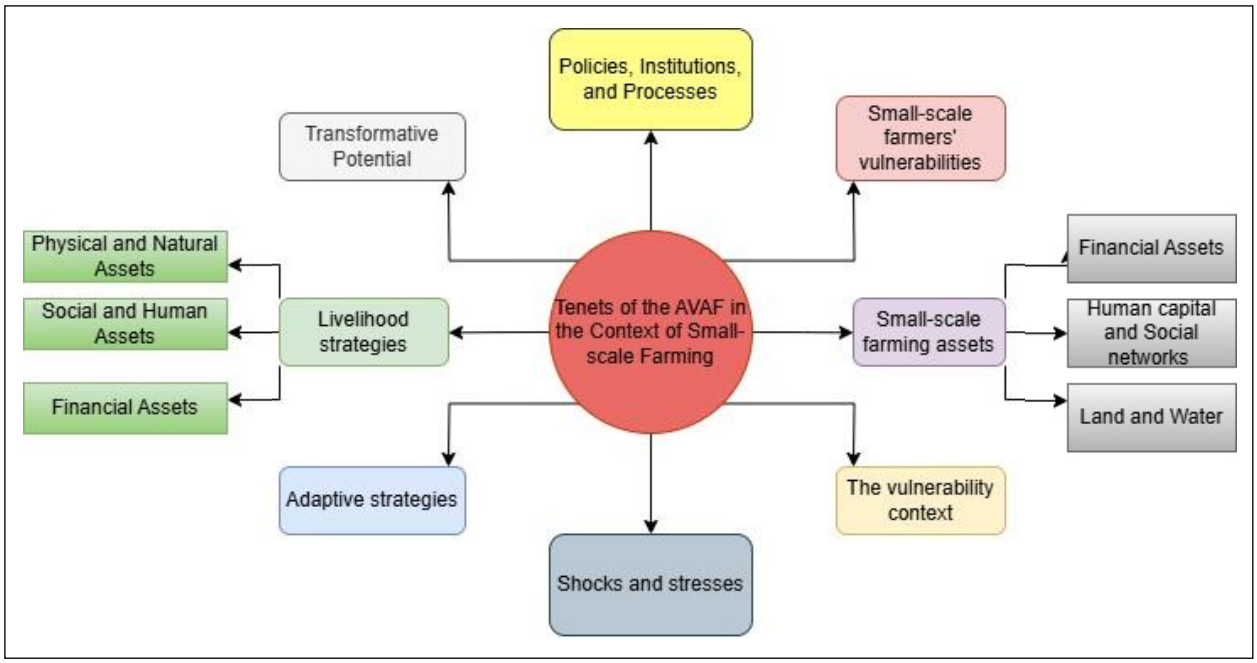
This study employs Caroline Moser's asset vulnerability analytical framework (AVAF) to critically examine the persistent structural and institutional constraints that undermine small-scale farmers' participation in formal agricultural markets in Jozini, KwaZulu-Natal. The AVAF highlights the importance of asset ownership, access, and control

in determining the resilience of individuals and communities to both chronic poverty and external shocks (Moser, 1998, 2021). In the context of small-scale agriculture, the AVAF provides a multi-dimensional lens to examine how deficiencies in physical, natural, financial, human, and social assets intersect with institutional constraints to shape market participation. In this study, physical assets were operationalized through access to infrastructure and equipment, financial assets through credit and production inputs, human assets through skills and training, social assets through networks and cooperative engagement, and natural assets through land and water resources. This organization enabled a systemic coding of farmers' experiences, facilitating analysis of how asset constraints influence the effectiveness of market access interventions.

In this framework, vulnerability is shaped by three interrelated components: the asset portfolio of households, the vulnerability context (including environmental, economic, and policy shocks), and the institutional and policy landscape that mediates asset access and livelihood strategies (Moser, 2021). In this study, the AVAF was applied to interpret focus group data and to assess the extent to which small-scale farmers' market exclusion is rooted in systemic asset deprivation and the inadequacy of existing state-supported agricultural programs. The framework enabled the identification of entrenched barriers such as poor transport and irrigation infrastructure, limited access to credit and production inputs, tenure insecurity, and the ineffective implementation of key interventions such as the Comprehensive Agricultural Support Program (CASP), the Agri-Parks initiative, and broader frameworks like the Integrated Rural Development Strategy (IRDS) and the National Development Plan (NDP).

As illustrated in Figure 1, the AVAF provides a structured method for conceptualizing how market access interventions interact with small-scale farmers' asset endowments to shape patterns of vulnerability and exclusion. The framework situates market participation in a broader vulnerability context, thus facilitating an assessment of how environmental, economic, and infrastructural stressors interact with asset deficiencies to condition farmers' capacity to benefit from such interventions. In this respect, reliance on informal markets is understood

Figure 1. Application of the Asset Vulnerability Analytical Framework (AVAF) in the Context of Market Access Interventions



Source: Adapted by the authors.

not as a discretionary choice, but as an outcome of constrained asset environments that offer limited protection against price fluctuations or market saturation (Gaillard, 2021). The AVAF therefore provides an analytical basis for examining farmers' experiences of market access interventions, the asset-mediated constraints they encounter, and the broader equity implications arising from these dynamics.

The AVAF provides a concise analytical basis for examining how market access interventions mediate small-scale farmers' vulnerability through their interaction with asset endowments and institutional arrangements (Müller et al., 2020). In this study, the framework is employed to examine whether market access programs enhance farmers' capacity to engage formal markets or reproduce conditions of exclusion by failing to address underlying asset constraints. The AVAF enables farmers' continued reliance on informal markets to be interpreted as an outcome of structurally constrained choices rather than individual preference. While the framework informs the analytical approach, the empirical findings remain the primary focus of the study.

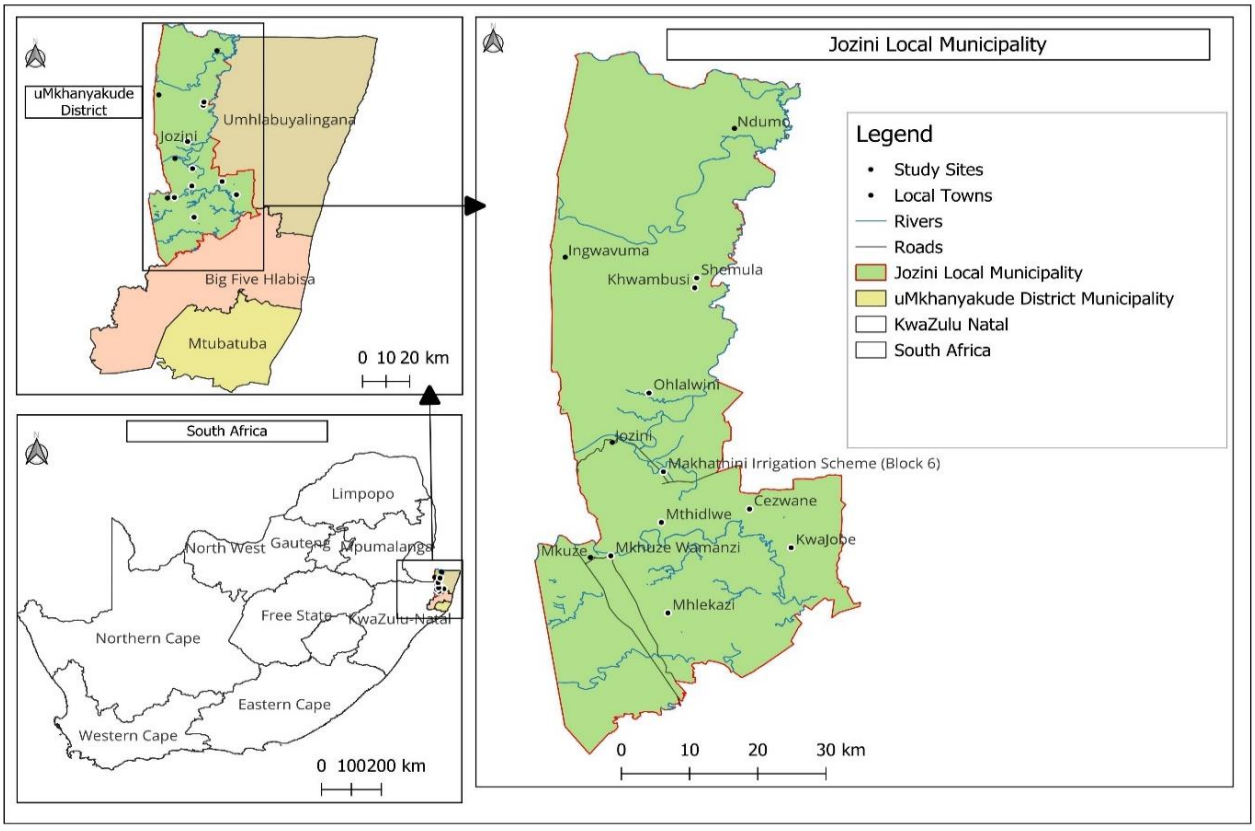
Research Materials and Methods

This section outlines the methodological framework of the study and the procedures employed to generate and analyze data. The discussion proceeds from the study area and its contextual setting to the research approach, sampling strategy, and data collection procedures. It further addresses the conceptualization and operationalization of key study constructs, data analysis techniques, and measures taken to ensure trustworthiness and reflexivity, concluding with the ethical considerations that governed the research process.

Study Area and Context

This study was conducted in the Jozini Local Municipality (JLM), located in the uMkhanyakude District in northern KwaZulu-Natal, South Africa (as shown in Figure 2). Jozini is one of the coun-

Figure 2. Map of the Study Area: South Africa, uMkhanyakude District, and Jozini Local Municipality



try's most socioeconomically marginalized municipalities, with high levels of poverty, unemployment, and food insecurity. Agriculture plays a pivotal role in sustaining rural livelihoods in the region, particularly through small-scale farming practices. The municipality borders Mozambique to the northeast and Eswatini to the northwest, placing it in a context of cross-border trade, seasonal labor migration, and informal economic flows (KZN-DARD, 2023). Despite this strategic location, small-scale farmers in Jozini continue to face significant challenges in accessing formal local and cross-border markets. These challenges are largely rooted in structural constraints such as poor road conditions, limited access to irrigation, and a weak integration into formal trade networks.

Although the region hosts the Pongola poort (Jozini) Dam and the historically significant Makhathini Irrigation Scheme, most smallholders depend on rain-fed cultivation due to the dysfunctional state of irrigation infrastructure (Nxumalo, 2014). The communal land tenure system, administered by traditional authorities, further complicates agricultural investment by preventing local small-scale farmers from using land as collateral for credit. Poor transportation infrastructure and limited extension services continue to elevate the vulnerability of local farmers (Maziya, 2023).

These geographical, socio-economic, and institutional dynamics make Jozini an ideal case study for exploring the constraints to formal market access and assessing the effectiveness of market-related interventions.

Research Approach

The study adopted a qualitative research approach guided by a phenomenological method to explore the lived experiences of small-scale farmers in engaging with formal agricultural markets. A phenomenological lens was employed to uncover the meanings participants ascribe to their experiences navigating systemic barriers (Creswell & Creswell, 2017). This approach aligns with the asset vulnerability analytical framework (AVAF), which foregrounds the role of asset access and control in shaping livelihood strategies, particularly under conditions of structural vulnerability.

Sampling Methods

Purposive sampling was used to identify individuals and institutions with direct experience in small-scale agricultural production and market engagement. Two distinct participant groups were targeted: cooperative-affiliated small-scale farmers, and institutional stakeholders. Farmers were selected from six key agricultural areas in Jozini: Shemula, Mkhuze Wamanzi, Mhlekazi, Mthidlwe, Cezwane, and Ohlalwini. These sites were chosen based on their high concentration of cooperative activity and observable dependence on both formal and informal market structures.

In total, six focus group discussions (FGDs) were conducted with 124 small-scale farmers representing 25 agricultural cooperatives. Additionally, seven semi-structured interviews were held with key informants from the KwaZulu-Natal Department of Agriculture and Rural Development (DARD) and the Local Economic Development (LED) office (these included five agricultural advisors and two senior management officials), as these institutions are directly responsible for the design, implementation, and oversight of agricultural support and market access interventions affecting small-scale farmers in Jozini. Their inclusion enabled an institutional analysis of how such interventions are operationalized and how they intersect with small-scale farmers' asset constraints and market participation outcomes. This sample structure enabled a multidimensional analysis of farmers' lived experiences, technical and infrastructural constraints, and institutional responses to market access challenges. A detailed summary of participants is provided in Table 1.

The distribution of participants across different study areas reflected a range of agricultural backgrounds and local contexts that enriched the analysis (see Table 1). The study included five agri-advisors and two managerial officials, whose diverse expertise in farming practices, economic conditions, and policy frameworks provided valuable insights.

We did not systematically collect gender and age disaggregated data during participant recruitment or data collection, as the primary focus of the study was on farmers' institutional positioning, asset endowments, and engagement with formal

Table 1. Summary of Participants

Study Area	Focus Group Name (Agricultural cooperatives)	Number of participants	Number of cooperatives
Shemula	FG-1	16	2
Mkhuze Wamanzi	FG-2	16	1
Mhlekazi	FG-3	18	6
Mthidlwe	FG-4	40	9
Cezwane	FG-5	10	2
Ohlalwini	FG-6	24	5
Agri-advisor 1	SI- 1	1	1
Agri-advisor 2	SI- 2	1	1
Agri-advisor 3	SI- 3	1	1
Agri-advisor 4	SI- 4	1	1
Agri-advisor 5	SI- 5	1	1
Municipal Official—Management	SI- 6	1	1
DARD Official—Management	SI- 7	1	1

markets, rather than demographic characteristics. Accordingly, this study does not make claims regarding the proportional representation of women or youth in the sample. The absence of gender and age data, however, may limit insights into how asset access and market participation are shaped differentially by gendered and generational dynamics well documented in South African agriculture, particularly with respect to land access, access to capital, and engagement with formal market institutions. While this constrains the ability to conduct intersectional analyses, the emphasis on cooperative membership, land tenure, and market participation facilitated a rigorous examination of structural and institutional factors shaping small-scale farmers' experience. Future research should consider the systematic inclusion of gender and age variables to enable more comprehensive, equity-oriented evaluations of market access interventions.

We collected primary data through FGDs and semi-structured interviews. The FGDs were conducted in isiZulu by the lead researcher to ensure cultural and linguistic relevance while capturing farmers' perspectives on barriers. Both instruments were carefully designed to operationalize key constructs informed by the AVAF. Furthermore, they facilitated an in-depth understanding of how asset availability, institutional processes, and policy implementation intersect to influence small-scale farmers' participation in formal markets. The data provided critical grassroots insights into the practical realities of market access initiatives and the extent to which they align with farmers' needs. These instruments enabled a comprehensive analysis of market access interventions from both beneficiary and institutional perspectives, grounded in the AVAF theoretical lens. Audio recordings were then transcribed and translated into English by the same researcher. To enhance translation accuracy and maintain analytical rigor, transcripts were cross-checked against the original recordings, and key excerpts were backtranslated to verify consistency. Coding and thematic analysis were performed by the lead researcher through an iterative and reflexive process, with regular reviews of emerging codes and themes to ensure internal consistency and reliability. While no formal external validation of a coded subset was undertaken, the use of a single-coder approach was methodically appropriate for this study, given the in-depth, interpretive nature of the analysis and the researcher's sustained immersion in the data. Analytical rigor was further supported by the application of a theoretically informed coding framework (the asset vulnerability analytical framework), the systematic comparison of codes across focus group discussions, and the maintenance of a transparent audit trail linking raw data, codes, and emergent themes. These procedures provided systematic validity checks and supported the credibility of the findings.

Conceptualizing and Operationalizing Constructs: Alignment with Market-Access Interventions Study

This study employed FGDs with small-scale farmers and semi-structured interviews with govern-

ment and municipal officials to examine market access interventions in the Jozini Local Municipality. Both instruments were designed to operationalize key constructs from the AVAF, focusing on asset availability, institutional processes, and policy implementation. The FGDs captured the farmers' experiences of barriers to market access and the assets they use to participate in formal markets, while the interviews explored institutional perspectives on policy and programmatic factors shaping market access. This design ensured that data collection addressed both grassroots realities and institutional contexts relevant to small-scale farmers' engagement with formal markets.

Data Analysis

We applied an inductive thematic analysis, following Clarke and Braun's (2014) six-step approach. All audio recordings were transcribed, translated into English where necessary, and coded manually using NVivo software. Emerging patterns and recurring themes were categorized and interpreted in relation to the study's research objectives. The AVAF guided the organization and interpretation of the data. Special attention was given to how the availability and adequacy of physical, financial, human, natural, and social assets influenced participants' engagement in formal markets. The analysis also explored how the broader vulnerability context, including climate shocks, policy deficiencies, and infrastructural exclusion, interacted with asset constraints to shape livelihood strategies.

Data Trustworthiness and Reflexivity

To ensure methodological rigor and the credibility of findings, the study adopted multiple strategies addressing Guba and Lincoln's (1994) criteria of credibility, dependability, confirmability, and transferability. All FGDs and semi-structured interviews were audio-recorded and systematically transcribed. Detailed field notes documented contextual observations, nonverbal cues, and immediate reflections, complementing the audio data. Digital records were organized using standardized file naming conventions, secured via password protection, and regularly backed up to preserve data integrity.

To enhance credibility, member checking was employed post-data collection, allowing participants to confirm the accuracy of transcripts and clarify statements. Peer debriefing was conducted with experts in rural agricultural systems, facilitating critical evaluation of coding frameworks and interpretations. Reflexive practices were applied throughout, acknowledging the researcher's positionality as a critical realist, thereby mitigating interpretive biases in analysis.

Analytical rigor was further ensured through a systematic inductive thematic analysis following Clarke and Braun's (2014) six-step approach. Coding was consistently applied across all data sources, and an audit trail documented analytical decisions, including code development, theme refinement, and the integration of the AVAF. This approach facilitated a nuanced understanding of how asset deficiencies intersect with institutional constraints to shape small-scale farmers' engagement with formal markets.

Finally, transferability was addressed through thick description, presenting detailed accounts of participants' experiences alongside contextual factors such as institutional practices and environmental conditions. Divergent and contradictory cases were explicitly discussed, reflecting the complexity of farmers' market engagement and ensuring a balanced and transparent representation of findings. By integrating these practices, the study provides findings that are credible, dependable, and grounded in the realities of small-scale farmers in Jozini.

Ethical Considerations

The study was reviewed and approved by the Humanities and Social Sciences Research Ethics Committee (HSSREC) at the University of KwaZulu-Natal (Reference number HSSREC/00007136/2024). All participants were provided with detailed information about the study's purpose, procedures, and ethical safeguards. Informed consent was obtained from all participants before data collection, and participants were made aware of their right to withdraw from the study at any stage without penalty. Anonymity and confidentiality were strictly upheld, and data were securely stored in compliance with the university's research ethics protocols.

Results

The analysis shows that small-scale farmers in Jozini, most of whom operate in cooperative structures and communal land and produce at subsistence to semi-commercial levels, face persistent barriers to formal market participation. The findings identify four dominant patterns across the market access interventions examined: uneven and limited implementation, weak institutional coordination, underutilized or nonfunctional infrastructure, and unequal distribution of program benefits. Farmers consistently reported constraints related to inadequate production support, insufficient skills development and extension services, high transaction and transport costs, and unstable or short-lived market linkages. Together, these findings indicate differences between the intended objectives of market access interventions and small-scale farmers' experiences.

The Jozini Value-Adding Center

The Jozini Value-Adding Center (JVAC) is an agricultural initiative aimed at enhancing the value chain of small-scale farmers in the region. The focus was on adding value to locally produced agricultural products by offering processing, packaging, and product development facilities. Participants consistently reported that the JVAC facility had been constructed but remained non-operational. Farmers indicated that the facility was intended to provide cleaning, packaging, and storage services for fresh produce, yet these services were never implemented. As a result, farmers were unable to use the center for value addition or post-harvest handling.

A small-scale farmer from FG-5 mentioned an example of programs that never materialized:

> There was once a program introduced here that was meant to work for all of us. The JVAC was built, and we were told that we could produce fresh produce of our choosing and store it in the JVAC in order for it to be cleaned and packaged. However, the building is still standing, but it has never been used. Each farmer would've used that place, but this did not come to fruition.

Across discussions, farmers described their continued reliance on selling unprocessed produce immediately after harvest. Participants reported that the absence of functional processing and storage facilities limited their ability to delay sales or access higher-value markets. No participants indicated having used the JVAC since its construction, despite its physical presence in the area. Although the infrastructure exists, farmers reported that its nonfunctionality prevents them from using it for processing, storage, or value addition.

DARD Dam and Dip Initiative

The DARD dam and dip initiative is an agricultural project aimed at improving the farming conditions of small-scale farmers in the area. Farmers and agricultural advisors reported that the dam and dip initiative, implemented by DARD, focuses on providing essential infrastructure such as dams for water storage and dips for livestock health management. However, access to this infrastructure was described as limited relative to the number of farmers in the area. An agri-advisor noted that:

> We have the dam and dip initiative; the facilities and equipment are there, but not up to par to help everyone due to limited access. We have targets we are given each year for dams and dips. (SI- 4)

Agri-advisors noted that despite the availability of two dams and a dip, the targets are insufficient for the more than 500 farmers in the area, creating a backlog and leaving many without access. Both small-scale farmers and agricultural advisors reported long waiting periods and uneven access to these facilities, with many farmers unable to benefit from the infrastructure. Farmers described continued challenges related to water availability for irrigation and livestock health management, despite the presence of these initiatives.

PESI Grant Program

The PESI program focuses on supporting small-scale subsistence farmers in improving their productivity. The program typically provides inputs such as seeds, fertilizers, tools, and irrigation systems, helping small-scale farmers to transition from

subsistence farming to market-oriented farming. Farmers reported having mixed experiences with the PESI program. Small-scale farmers reported receiving material support, such as inputs for poultry production, and some market linkages were facilitated. Mixed experiences were shared by small-scale farmers in FG-4 who said:

> We were once recipients of the PESI program, and our advisor helped connect us to the Hello Choice market. Our chicken breeders applied for PESI, and we received help. However, we do not receive much training on how to grow our businesses and sustain them.

Farmers described mixed experiences with the PESI program. While farmers acknowledged the value of inputs and market linkages, they consistently noted limited access to training in business management, production planning, and market sustainability. Support was described as short-term and input-focused, with minimal follow-up after the initial provision of resources. Farmers reported that PESI strengthened financial assets through input provision; however, insufficient investment in human assets, particularly skills development and capacity-building, was said to constrain longer-term sustainability and equitable access to formal markets.

DARD Mechanization Program

The DARD Mechanization Program was reported to enhance small-scale farmers' productivity and efficiency by granting access to mechanized farming equipment. Small-scale farmers noted that the program provides tractors, plows, and essential machinery to support land preparation, planting, and harvesting. By reducing the reliance on manual labor, the program helps farmers increase their operational capacity and scale up production. Farmers reported that mechanized equipment allowed them to prepare land and plant crops more efficiently. Farmers described this support as beneficial but unevenly distributed. A small-scale farmer from FG-6 said:

> When it comes to livestock (goat, sheep, cows, and piggery) production, we know nothing about such programs. We just fend for ourselves. It is a bit different in crop production because we receive assistance with tractors from the department, which has helped ensure that everyone is up and working. The tractor comes and does what it needs to do, and the onus is then on us to produce.

This farmer reveals a difference in support received by livestock (*goat*, *sheep*, *cows*, *and piggery*) farmers and crop farmers. While the assistance is appreciated, farmers reported that it is not comprehensive enough to address the broader challenges they face, and it places the responsibility on the farmers to ensure they can produce. An agri-advisor stated that:

> There are quite a few interventions in place. One such intervention is our mechanization program. Our main challenge with this program, while it is a good program, is its limited reach. We are unable to reach the whole of Jozini, and so we find ourselves in a predicament because some farmers benefit while others do not. (SI-1)

The advisors' remarks confirm that the program did not reach all farmers in the municipality. Livestock producers reported limited awareness of or access to mechanization-related interventions. Both these accounts indicate that access to physical assets (mechanized equipment) and the institutional environment were uneven, with some farmers receiving support while others did not.

DARD—Hello Choice Market

The Hello Choice Market was created to connect small-scale farmers with markets to sell their produce directly to consumers. This initiative aims to improve market access for farmers in rural areas by offering a platform that allows them to sell fresh and locally grown products. Small-scale farmers identified the Hello Choice Market as one of the more functional market access interventions, granting farmers access to a wider customer base and securing better prices for their products. Farmers reported that agricultural advisors facilitated their participation, enabling them to sell produce directly

to consumers. A farmer from FG-6 shared a somewhat positive experience:

> We have our advisor who connected us to the Hello Choice market. That has been one of the most successful interventions in our area. There was also a boy who came here from the municipality. He said he would help us with fencing, and he took down our details. We never saw him again.

Farmers in FG-6 highlighted the positive impact of their connection to the Hello Choice Market. Through their agricultural advisor, they were able to sell fresh produce directly to consumers, gaining access to a broader customer base and better prices. Farmers reported improved market access and better prices through this initiative. However, participants also described instances where other promised forms of support, such as fencing assistance from municipal representatives, did not materialize.

These experiences highlighted variability in implementation, effectiveness, and follow-through across different market access initiatives. Across all the interventions examined, agricultural producers and officials consistently reported a divergence between program design and practical functionality. Initiatives centered on fixed infrastructure and productive support, such as the JVAC, dam and dip facilities, and mechanization services, were widely described as unevenly accessible, partially implemented, or non-operational, limiting their effective use by the majority of farmers. In contrast, market-linkage interventions facilitated through direct advisory support, most notably the Hello Choice Market, were more frequently reported as functional, albeit constrained by limited scale and inconsistent complementary support. Input-focused programs, including PESI, were characterized by short-term material assistance with limited follow-up, which participants associated with difficulties in sustaining production and market participation over time. Small-scale farmers and agricultural officials frequently reported that the usefulness of interventions depended on whether they were accessible, functional, and consistently supported. Furthermore, they described how asset-based constraints interact with institutional gaps to limit their market participation.

Table 2 summarizes the intended AVAF asset targets and key implementation gaps for each intervention, providing a concise overview to complement the detailed narrative above.

Discussion

The findings highlight a fundamental disconnect between the objectives of agricultural market access interventions and the lived realities of small-scale farmers in the Jozini Local Municipality. While programs such as the Jozini Value-Adding Center (JVAC), mechanization support, dam and dip infrastructure, PESI grants, and digital platforms like Hello Choice were intended to strength-

Table 2. Market Access Interventions and Associated Asset Vulnerability Analytical Framework (AVAF) Assets and Implementation Gaps

Intervention	Primary AVAF Asset Category	Key Implementation Gap
Jozini Value-Adding Center (JVAC)	Physical assets	Infrastructure exists but remains non-functional; farmers are unable to use the center for processing, storage, or value addition.
DARD Dam and Dip Initiative	Physical and natural assets	Limited access relative to the farmer population; uneven distribution and long waiting periods reduce operational utility
PESI Grant Program	Financial and human assets	Short-term input provision with minimal follow-up; insufficient capacity-building limits sustainable production and market engagement
DARD Mechanization Program	Physical assets	Uneven distribution of machinery; limited reach; some farmers, especially livestock producers, remain unserved
Hello Choice Market	Social and financial assets	Advisory support facilitates market access, but scale limitations and inconsistent follow-through reduce overall effectiveness.

en production and link farmers to formal markets, their implementation has largely failed to address the interconnected structural and asset-based constraints facing local farmers. For instance, one participant reported that "the JVAC was built, and we were told that we can produce fresh produce of our choosing and store it there to be cleaned and packaged. However, the building is still standing, but it has never been used" (FG-5), demonstrating how non-operational infrastructure prevents value addition and contributes to post-harvest losses. Similarly, a farmer reflected on the uneven reach of mechanization support, stating that "when it comes to livestock production, we know nothing about such programs. We just fend for ourselves. It is a bit different in crop production because we receive assistance with tractors from the department" (FG-6). These experiences indicate that partial coverage and inconsistent program implementation exacerbate existing vulnerabilities and reinforce dependency on informal markets. This pattern reflects broader critiques in the literature, where poorly contextualized development initiatives risk reinforcing exclusion rather than enabling meaningful integration into formal markets (Shilomboleni et al., 2024).

Across interventions, issues of scale, coverage, and institutional responsiveness emerged as key weaknesses. Livestock infrastructure and mechanization support were implemented at levels insufficient to meet local demand, resulting in uneven access and limited functional impact. Comparable patterns are reported by Mapiye and Dzama (2024), who reveal that livestock development programs in rural South Africa are frequently driven by centrally defined delivery targets rather than locally grounded needs, leading to infrastructure that exists but remains inaccessible to most producers. Similarly, institutional failures were evident in crop-focused interventions, particularly the JVAC, which was envisioned as a facility to reduce post-harvest losses and provide value-adding opportunities for crop producers, but remains non-operational. Singh et al. (2025) similarly demonstrate that when agro-processing facilities are poorly maintained or fail to become operational, small-scale farmers are compelled to sell produce immediately after harvest at low prices, undermining income stability and food security. Together, these parallels suggest that the effectiveness of market access interventions depends less on their nominal presence than on their sustained functionality and responsiveness to local production realities.

Governance and accountability failures emerged as a significant constraint undermining the effectiveness of market access interventions. Reports on financial mismanagement, corruption, and weak oversight mirror findings by Mtero et al. (2023), who document how elite capture and limited institutional capacity in rural development programs distort resource allocation and weaken accountability mechanisms. For example, one farmer documented how elite capture and limited institutional capacity in rural development programs distort resource allocation and weaken accountability mechanisms. For example, participants reported that infrastructure intended to support produce cleaning, packaging, and storage through the JVAC remained unused despite being established to benefit local farmers.

Another farmer acknowledged the value of mechanization interventions but emphasized that their benefits were unevenly distributed because limited program reach meant no only some farmers in Jozini were able to access support.

Although program reforms have attempted to improve delivery by channeling support through service providers rather than direct cash transfers, the absence of robust monitoring has limited progress. These accounts indicate that governance deficits not only waste resources but also erode farmers' trust in institutions meant to support them, thereby reinforcing inequalities in market access and participation.

Targeted initiatives, such as the Hello Choice platform and the RASET transport support program, demonstrated more promise when backed by committed local agri-advisors. Farmers' participation and market engagement improved in these instances, indicating the importance of intermediary support in enabling access to markets. However, their impact remained limited in scale due to a lack of resources and poor institutional coordination. This mirrors findings by Mapiye et al. (2023), who demonstrate that digital and market-linkage platforms yield sustained benefits when accompa-

nied by broader support measures, including training, infrastructure development, and consistent extension services. In the absence of these enabling conditions, such interventions remain fragmented and unable to generate widespread livelihood or food security gains.

Comparative evidence from other African contexts further situates these findings in broader regional patterns. In Kenya, small-scale farmers' engagement with digital market platforms resulted in tangible improvements in market linkages only when sustained advisory support and extension services were provided alongside the technology (Muriuki et al., 2021). Similarly, in Ghana, market access programs achieved lasting benefits primarily when interventions combined training, infrastructure development, and continuous technical assistance (Odonkor, 2021). These examples highlight that digital and market-linkage interventions, while promising, require complementary support to effectively strengthen farmers' livelihoods and enhance resilience. Without such integration, initiatives remain fragmented, and their potential to mitigate market-related vulnerability is severely constrained.

The continued presence of these shortcomings illustrates how interventions have not effectively consolidated the asset base necessary for sustained market engagement. Persistent deficiencies in infrastructure, access to finance, and skills development have limited farmers' ability to transition away from informal markets and reduced their capacity to respond to economic and production shocks. Similar patterns are documented in the literature (Pancras et al., 2025; Reddy & Barbalat, 2022), where fragmented and short-term interventions fail to generate durable asset accumulation and, in some cases, exacerbate rural vulnerability by raising expectations without delivering sustained support.

In conclusion, the data reveal that, despite the presence of multiple public and private interventions implemented in the Jozini Local Municipality, they have not fundamentally shifted small-scale farmers' vulnerability to market access constraints. Farmers' accounts suggest that interventions are frequently characterized by weak implementation, limited coverage, and inadequate responsiveness to local conditions, constraining their effectiveness in practice. The persistence of deficiencies in critical assets further shapes farmers' capacity to engage with and benefit from these interventions, often reproducing rather than alleviating existing patterns of exclusion. In response, local government and nongovernmental organizations (NGOs) should prioritize sustained capacity-building initiatives that provide ongoing technical and business support, ensure interventions are co-designed with farmers to reflect local realities, establish robust accountability and monitoring mechanisms to improve transparency and institutional responsiveness, and integrate support across critical assets to strengthen resilience. Implementing such measures is essential for fostering equitable access to markets, enhancing livelihoods, and supporting long-term food security for small-scale farmers in the region.

Limitations

This study is contextually bound to the Jozini Local Municipality, a predominantly rural area with distinct infrastructural and institutional characteristics. As such, the findings may not be generalizable to other regions in South Africa with differing institutional, infrastructural, or market conditions. While the study draws strength from in-depth qualitative data gathered through focus groups and semi-structured interviews, its reliance on farmers' and government officials' perspectives limits the analysis of how other critical actors, such as private-sector buyers, market agents, or nonparticipating stakeholders, perceive or experience these interventions.

Given the focus on marginalized farming communities, potential power dynamics in focus group settings and between the researcher and participants may have influenced how experiences were articulated, including the possibility of social desirability bias or restrained criticism of state-led programs. To mitigate this, discussions were facilitated in familiar community settings, emphasized confidentiality, and encouraged open reflection; however, the influence of researcher positionality cannot be fully eliminated.

Additionally, the qualitative research design prioritized in-depth exploration of farmers' experiences and institutional dynamics rather than quantitative measurement; consequently, the study does

not employ graphs, charts, or numerical indicators to assess intervention performance or outcomes over time. Demographic variables such as age and gender were not systematically collected during data gathering, as the analytical focus centered on farmers' institutional positioning, asset access, and modes of market participation, which limits the scope for intersectional analysis of vulnerability.

Notwithstanding these limitations, the study provides robust, contextually grounded insights into how market access interventions are implemented and experienced in practice, offering a credible basis for understanding the structural and asset-based factors shaping small-scale farmers' engagement with formal markets. Future research could expand on this by incorporating longitudinal data and engaging a wider range of market actors to build a more comprehensive account of intervention outcomes.

Conclusion

This study critically evaluated small-scale farmers' perceptions of public and private market-access interventions in the Jozini Local Municipality to assess whether these initiatives mitigate market-related vulnerabilities or perpetuate existing patterns of exclusion. Guided by the asset vulnerability analytical framework and informed by qualitative evidence, the findings indicate that, despite the presence of multiple market access interventions, including the Jozini Value-Adding Center, dam and dip infrastructure, PESI grants, mechanization support, and market linkage platforms, meaningful improvements in farmers' access to formal markets remain limited.

Farmers' experiences suggest that market-access interventions are undermined by persistent implementation challenges, including inadequate maintenance, inconsistent institutional support, poor communication, and insufficient farmer training. These constraints shape how interventions are encountered in practice and contribute to a pronounced disconnect between policy intent and farmers' lived realities. Rather than functioning as pathways into formal markets, many interventions operate in fragmented and uneven ways, reducing their capacity to support sustained market participation.

The study further demonstrates that small-scale farmers' capacity to derive benefits from market access interventions in Jozini is constrained by persistent deficiencies across critical asset domains. Limitations in physical assets, including inadequate water infrastructure, non-operational storage and processing facilities, and restricted transport networks, undermine consistent production and the ability to meet formal market requirements. Financial constraints further restrict farmers' capacity to absorb input costs, transaction fees, and other market-related expenditures, limiting their engagement with programs such as PESI grants. Concurrently, gaps in human assets, notably insufficient training, business management guidance, and market knowledge, inhibit farmers from fully leveraging mechanization support and digital platforms such as Hello Choice. These intersecting deficits not only reduce the effectiveness of market access interventions but also reinforce dependence on informal markets, which, while providing immediate livelihood support, remain precarious and insufficient to secure sustainable income or food security.

Small-scale farmers in the Jozini Local Municipality continue to experience significant barriers to formal market participation. Addressing small-scale farmers' market access challenges in Jozini demands an integrated strategy that holistically considers infrastructural constraints, institutional weaknesses, and asset vulnerabilities. Interventions should not only focus on providing infrastructure and mechanization support but also ensure consistent program implementation, ongoing maintenance, and robust training and advisory services to enhance farmers' capacity to engage with formal markets. Strengthening coordination, accountability, and communication across public and private initiatives is essential to prevent fragmented delivery that reinforces existing patterns of exclusion. These measures are crucial for facilitating the meaningful integration of small-scale producers into formal markets, thereby strengthening rural livelihoods and contributing to broader food security objectives in the region. Looking forward, the strengthening of such interventions can contribute not only to local economic resilience but also to broader development goals, supporting SDG 2

("Zero Hunger") by enhancing food security and SDG 8 ("Decent Work and Economic Growth") by promoting inclusive, market-based opportunities for small-scale producers.

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