



The cost of access: Examining asset-based barriers to formal agricultural markets in rural Jozini, South Africa

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ABSTRACT

Small-scale rural farmers in South Africa encounter persistent barriers to formal market participation, despite the potential of these markets to enhance income stability, agricultural development, and food security. This study investigates the structural and institutional constraints that limit small-scale farmers' engagement with formal value chains, with particular emphasis on the role of asset availability and management. Employing the Asset Vulnerability Analytical Framework (AVAF), the research examines how deficiencies in critical assets (physical, financial, and institutional) contribute to farmers' marginalization. A qualitative methodology was adopted, drawing on data from six focus group discussions with small-scale farmers and seven semi-structured interviews with key informants in Jozini, KwaZulu-Natal. This approach enabled a comprehensive understanding of both farmers' experiential realities and institutional perspectives on market access. Findings reveal that farmers' capacity to meet formal market demands is constrained by logistical challenges, market saturation, limited organizational capacity, and inadequate transportation. Furthermore, insufficient institutional support and the absence of cooperative structures undermine farmers' bargaining power and market preparedness. The study highlights the necessity of a multidimensional strategy that prioritizes infrastructure development, institutional support, and capacity building to facilitate the integration of small-scale farmers into formal markets and to enhance their long-term livelihood security and resilience.

Contribution/Originality: This study contributes to the existing literature on small-scale farmers' market access constraints in rural South Africa. While numerous studies have analyzed these constraints in South Africa, only a few have focused specifically on rural areas. The research aligns with both national and international debates on inclusive agricultural development, market restructuring, and rural transformation.

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1. INTRODUCTION

Agriculture remains a cornerstone of rural development in under-resourced areas in South Africa, and the sector contributes approximately 3% to the country's GDP (Islam, 2024). While the Malaysian agricultural sector serves as an economic vehicle that contributes approximately 7.3% to GDP, smallholders rely on government support to help them farm and reach markets (Mei, Hoo, Shaurya, & Roy, 2025). For small-scale farmers, those operating on limited land, with low investment capacity and minimal mechanization, farming does not only serve as a means of income generation but also as a key survival strategy.

Similar dynamics are noted in numerous Asian countries, where small-scale farmers produce under unfavourable conditions and fragmentation, technological asymmetry, and limited access to financial and infrastructural investments (Arya, 2022). In India, for example, small-scale farmers in rural and remote areas face similar market access constraints due to poor rural connectivity, inadequate institutional support, and market volatility (Hans & Govindaswamy, 2023). These global parallels outline how structured small-scale farmer market exclusion is, thereby making South Africa a relevant case for comparative inquiry.

Agriculture offers shields against food insecurity (Magidi et al., 2021) in areas where state support is inconsistent and access to formal employment is scarce. In the South African context, small-scale farmers often occupy a precarious position in the agricultural economy. The amalgamation of small-scale farmers into formal markets such as supermarket supply chains, commercial retailers, government procurement programmes like the Farmer Support Programme (FSP), and regulated auctions is often an unattainable goal (Madonsela, 2021).

Formal markets tend to enforce strict entry requirements, such as the need for consistent production volumes, meeting quality assurance standards, the requirement for formal registration, and reliable delivery schedules (Smidt & Jokonya, 2022). Large agribusiness interests often shape these criteria, reducing flexibility and excluding small-scale farmers. For small-scale farmers without adequate access to key livelihood assets, such as capital to invest in improved inputs, training to meet quality requirements, or access to transport, these strict entry requirements present themselves as barriers and make formal market participation difficult or impossible (Gwiriri, Bennett, Mapiye, & Burbi, 2019).

While there has been a wide range of emphasis on the broader dynamics of South Africa's agricultural markets, there continues to be a growing need for more context-specific, sensitive investigations that will assess why small-scale farmers are still excluded from formal value chains. These investigations must not only assess current market structures but also analyze how farmers' access to key assets (Physical, social, natural, financial, and human) plays a pivotal role in determining their ability to meet formal market standards and negotiate equitable participation.

This study, therefore, focuses on small-scale farmers in Jozini, exploring the extent of their access to formal agricultural markets and the factors that influence their inclusion or exclusion.

2. THEORETICAL FRAMEWORK

The study adopts the Asset Vulnerability Analytical Framework (AVAF), as developed by Moser (1998), to examine the factors that shape small-scale farmers' access to formal agricultural markets in South Africa. It further offers a conceptual bridge between micro-level asset strategies and macro-level institutional dynamics, thereby supporting the call for context-sensitive, equity-oriented policy responses that address both material and structural determinants of market access.

According to this framework, vulnerability is not merely seen as a fixed condition but as an ever-changing and evolving relationship between asset availability, external shocks, policies, and market systems (Xu et al., 2020). The AVAF is well-suited for analyzing rural market participation in contexts of structural inequality, such as in South Africa's agrarian economy. In such settings, market access is not only negotiated through economic rationality or supply-demand dynamics but also by entrenched inequalities in asset distribution, infrastructure, institutional support, and policy implementation (Moser, 2021). Applied to the context of small-scale farming, the AVAF provides a powerful lens to analyze the persistent difficulties farmers face in engaging with formal value chains. Formal markets are typically governed by stringent standards, consistent supply requirements, and rigid contractual norms (Department of Agriculture Land Reform and Rural Development, 2022). Access to these formal markets for small-scale farmers is usually constrained by inadequate infrastructure, limited access to affordable inputs, weak extension services, and fragmented supply coordination. While many small-scale farmers rely on informal markets as immediate and accessible spaces for income generation, this reliance is often based on need rather than preference. Informal markets are frequently more responsive to local conditions and carry lower barriers to entry. However, the AVAF offers a deeper analysis of how this reliance on informal markets is a result of asset deprivation and institutional exclusion, not entrepreneurial choice. As such, the framework allows one to investigate the institutional conditions that prevent small-scale farmers from accessing formal markets, while also acknowledging the agency that small-scale farmers exercise in leveraging limited resources to sustain livelihoods.

On the other hand, in Jozini, external conditions such as climate variability, erratic rainfall, and rising input costs interact with inadequate roads and market infrastructure to increase the risks of market participation. Delays in delivery, spoilage, and inconsistent supply all undermine trust with formal markets, which often shift procurement toward larger commercial suppliers. Under such conditions, even when formal markets are theoretically open to smallholders, access to them remains a challenge if farmers lack significant asset investment.

From a policy perspective, the AVAF allows one to criticize national programmes such as the Comprehensive Agricultural Support Programme (CASP), the Ilima/Letsema initiative, or Agri-Parks, which aim to integrate small-scale farmers into formal value chains. While these initiatives aim to integrate smallholders into commercial value chains, they often fail to address the root causes of exclusion namely, unequal asset distribution and a lack of sustained

institutional support (Mncina & Agholor, 2021). Without targeted investments in infrastructure, finance, training, and cooperative governance, such programmes may offer symbolic inclusion while leaving structural barriers intact.

This study advances a more systemic understanding of market exclusion using the AVAF. Low small-scale farmer participation in formal markets is not merely viewed from a behavioral or a technical perspective, but it is instead located within a bigger matrix of asset deprivation, institutional weakness, and spatial inequality. This approach is not only relevant to the South African context shaped by apartheid-era legacies of land dispossession and rural neglect but also contributes to international debates on inclusive agrarian development, food systems equity, and rural transformation.

3. METHODS

This study was conducted in the Jozini Local Municipality (JLM), located in the uMkhanyakude District Municipality in KwaZulu-Natal, South Africa. Jozini was purposefully chosen for this study because of its heavy reliance on small-scale agriculture as a primary economic activity and the significant role of informal markets in facilitating farmers' market participation. The region's geographical remoteness, inadequate infrastructure, and socio-economic vulnerabilities contribute to farmers' dependence on informal markets, making it an ideal case for examining the dynamics of formal market engagement and its implications for small-scale agricultural livelihoods.

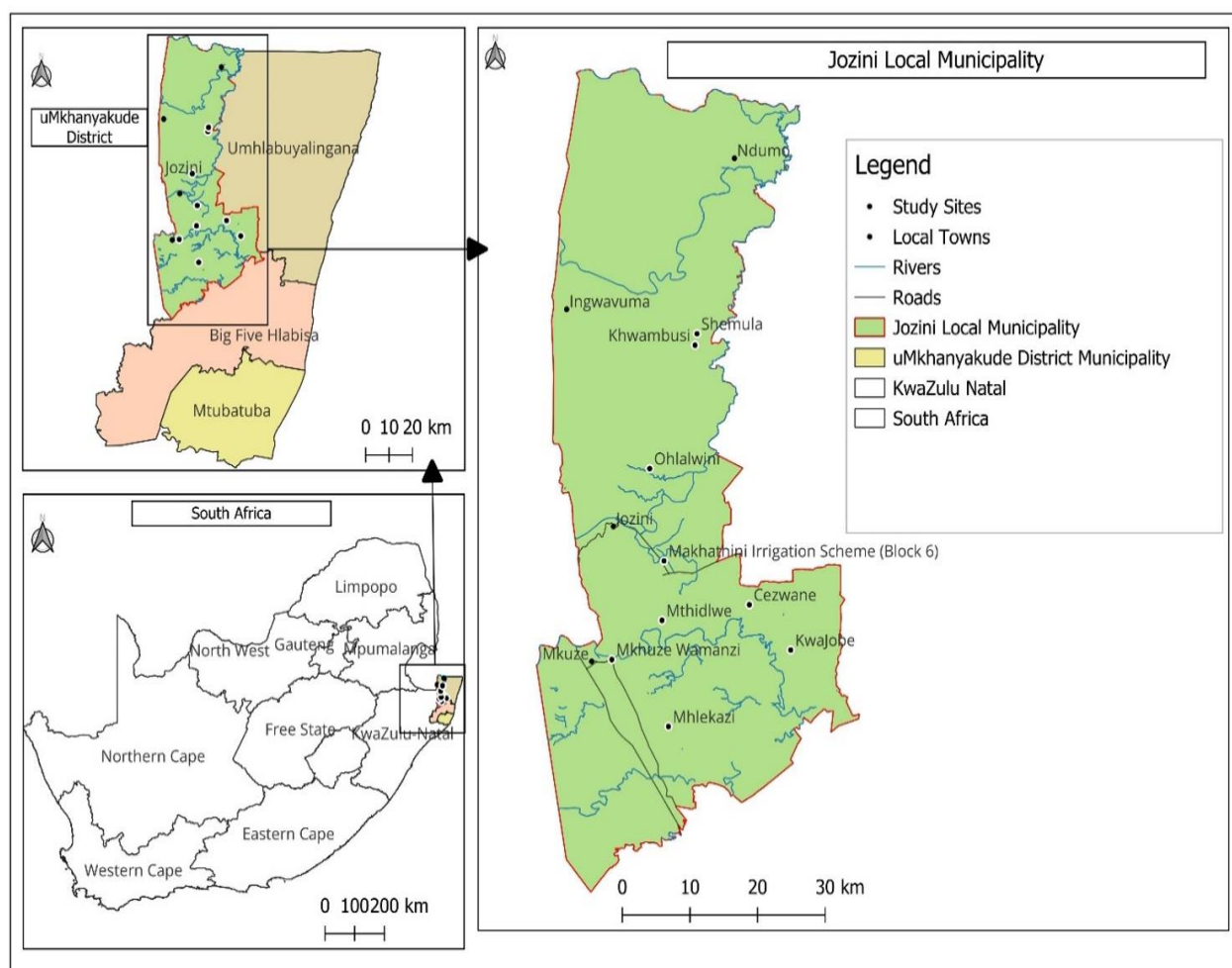


Figure 1. Study area map.

Figure 1 illustrates the study area in Jozini, KwaZulu-Natal, showing the locations of the communities where data were collected and highlighting key geographical features relevant to small-scale farming activities.

This study explored the lived experiences of small-scale farmers and government officials navigating formal agricultural markets using a qualitative research approach. This approach was suitable for uncovering how farmers interpret and respond to structural and institutional barriers, aligning with the Asset Vulnerability Analytical Framework (AVAF), highlighting the role of assets in shaping livelihood strategies.

Participants with direct experience in agricultural production and market engagement were purposefully selected for this study. The participants represented both grassroots and institutional perspectives, including cooperative-affiliated small-scale farmers, DARD agri-advisors, and LED officials. This diversity enabled a holistic understanding of technical, infrastructural, and policy barriers to formal market access.

A detailed summary of participants is provided in Table 1.

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
Mhlelazi	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

As shown in Table 1, the distribution of participants across different study areas reflected a range of agricultural backgrounds and local contexts, enriching the analysis. The study included 5 agri-advisors and 2 managerial officials, whose diverse expertise in farming practices, economic conditions, and policy frameworks provided valuable insights.

Data were gathered through six focus group discussions with small-scale farmers from 25 cooperatives across six sites in Jozini, and seven semi-structured interviews with institutional stakeholders. FGDs, conducted in isiZulu, explored barriers to market access, including infrastructure, transport, and input availability. The study used language experts to translate data collection tools from English to isiZulu. Thereafter, first-language Zulu speakers were approached and asked to review questions to ensure that they did not lose their context and to avoid direct translations. Interviews with five DARD advisors and two senior officials (from DARD and LED) addressed institutional support, policy gaps, and logistical challenges.

An inductive thematic analysis was applied using Braun and Clarke (2006) framework. Using NVivo for thematic coding, transcripts were coded manually and interpreted thematically. The Asset Vulnerability Analytical Framework guided the analysis, highlighting how access to physical, financial, human, and social assets shapes farmers' ability to engage in formal markets.

The Humanities and Social Sciences Research Ethics Committee (HSSREC) at the University of KwaZulu-Natal oversaw the ethical review process for this study, as it involved human participants. Having met all the ethical requirements, the study received an Ethical Clearance Certificate, which authorized the commencement of data collection (Reference number: HSSREC/00007136/2024). The study ensured that participants voluntarily consented to participate before it began, and participants were informed that they were free to withdraw at any time.

4. FINDINGS

This section presents the study's key findings, focusing on the barriers and enablers shaping small-scale farmers' access to formal markets in rural South Africa. Based on the data collected through focus group discussions with small-scale farmers and semi-structured interviews with agricultural stakeholders, the findings offer detailed accounts of how physical, institutional, and organizational factors interact to influence farmers' market participation.

While formal markets, described in this study as structured, regulated, and commercially oriented value chains, have the potential to improve rural livelihoods and food security, the study finds that small-scale farmers struggle to access them because of a wide range of interconnected barriers. These include inadequate infrastructure, high transportation costs, inconsistent production volumes, limited compliance with market standards, and weak organizational capacity. However, the findings also reveal that cooperative membership, institutional support from agri-advisors, and strategic alignment with market demands can partially mitigate these challenges.

The subsections that follow therefore explore the above-mentioned barriers in greater detail, beginning with farmers' experiences of engaging with formal markets, before examining the role of transportation, contracts, and organizational capacity in either facilitating or constraining sustained market access.

4.1. Small-Scale Farmers' Access to Formal Markets

The study's findings shed light on the multifaceted barriers that shape small-scale farmers' participation in formal markets. For the purposes of this study, formal markets refer to structured, regulated, and often commercialized market systems such as supermarket value chains, commercial retailers, government procurement programs (like the Farmer Support Programme), and formal auctions. Formal contracts, standardized pricing, consistent quality and quantity requirements, and stringent regulatory compliance are some of the most common attributes that distinguish formal markets from informal markets, such as local street vendors or community exchanges.

All small-scale farmers interviewed, particularly those affiliated with cooperatives, revealed that while they had previously participated in formal markets, obtaining and sustaining access to these markets proved to be a challenge compared to informal markets. Moreover, they reiterated that their participation in formal markets was irregular, highlighting the inconsistency and unpredictability of this form of market engagement.

Farmers noted they needed to meet stringent agro-food market requirements related to both volume and quality to successfully participate in formal markets. These requirements were found to be far more demanding than those in informal market settings. Farmers reported that these requirements often call for regular production, uniformity in product appearance, proper packaging, and sometimes compliance with certifications related to food safety and traceability. These requirements pose significant challenges for small-scale farmers with limited resources, many of whom often produce without adequate access to proper irrigation, sufficient inputs, or storage facilities. Nonetheless, cooperatives were identified as effective market access constraints relievers and strategies in overcoming some of these challenges. Cooperative membership enabled farmers to pool resources, share equipment, coordinate planting and harvesting schedules, and collectively negotiate with buyers thereby enhancing their capacity to meet the criteria of formal markets. Small-scale farmers further noted that agri-advisors serve as essential intermediaries between small-scale producers and formal market systems. Farmers rely heavily on these advisors for technical assistance, capacity building, and market linkage support. Agri-advisors play a pivotal role in helping small-scale farmers understand and comply with market standards, secure contracts, and coordinate logistical aspects such as transportation and delivery schedules. These findings highlight the importance of social and institutional assets within the Asset Vulnerability Analytical Framework (AVAF). While farmers may lack capital, information, or infrastructure needed to meet formal market requirements, these gaps can be mitigated though not eliminated through supportive institutional actors such as agri-advisors.

The study further found that the type of agricultural produce produced had a significant impact on the extent of formal market access. Farmers cultivating high-demand or standardized crops were more likely to meet the technical specifications required by formal buyers. In this context, cooperatives served as helpful mediums in aligning members' production strategies with market trends and in helping them navigate certification and packaging requirements. Conversely, farmers involved in livestock or less standardized crop production faced greater challenges, including higher perishability, inconsistent supply, and logistical difficulties.

Interestingly, contrasting views were noted from agri-advisors and agricultural officials in management, particularly pertaining to the extent and consistency of formal market access. The difference in views and opinions reveals a disconnect between policy perceptions and lived experiences, possibly driven by uneven distribution of support, planning, and market readiness among farmers.

These contradictions point to deeper systemic issues. The ability of farmers to meet formal market expectations is not solely a function of individual effort or cooperative organization; it is also shaped by structural constraints such as unequal access to resources, poorly coordinated government interventions, and fragmented supply chains. Without targeted investments in infrastructure, market literacy, and long-term institutional support, many small-scale farmers remain on the margins of formal market systems. As a result, barriers to consistent participation in formal markets persist, undermining farmers' potential to generate stable income, invest in productivity, and improve household food security. The inconsistent engagement with formal markets not only limits economic opportunities but may also deepen rural poverty and marginalization, particularly in under-resourced municipalities such as Jozini.

4.2. Transportation in Facilitating Market Access

Efficient transportation is a key facilitator of small-scale farmers' participation in formal markets, where timely delivery, consistent supply, and product quality are critical. While contracts and cooperative structures play key roles in market engagement, transportation is a determining factor in whether farmers can physically reach these markets at all. Despite having access to market opportunities and support structures, many small-scale farmers remain constrained by poor road conditions, high fuel costs, and logistical bottlenecks that make formal market access unreliable or unattainable.

A small-scale farmer in FG-6 noted.

FG-6: *"In our cooperative, we liaise with people from the Umhlosinga Development Agency to help transport our produce to the bigger markets such as Jwayelani Butchery stores and the larger markets in Durban".*

This example demonstrates how social and institutional assets can help counterbalance transportation deficits. The involvement of organizations like the Umhlosinga Development Agency provides logistical support that individual farmers would otherwise lack. These partnerships enable small-scale producers to overcome structural barriers and access higher-value formal markets in regional hubs such as Durban. Without such institutional interventions, the cost and complexity of reaching formal buyers would likely exclude these farmers altogether. This underscores the importance of formalized support structures and cooperative networks in improving market access.

SI-1 stated that.

SI-1: *"Quality and quantity are a significant challenge here, as are transaction costs. The lack of markets in rural areas is another factor. Distance from Jozini to larger markets is a primary challenge. Access from here to, for example, Durban, is a challenge in itself; transport-wise; diesel and petrol prices increase, thus limiting farmers from being able to send produce to bulk markets. Transport costs are a challenge; even transporting here to Jozini, some areas travel 60 km from Jobe to Jozini, and 80 km from Manyiseni to Jozini."*

This statement encapsulates the interconnected barriers that compound transportation challenges. Beyond the physical distance, small-scale farmers in rural areas like Jozini are burdened by the high transaction costs associated with fuel, vehicle maintenance, and driver labour. These financial burdens make regular delivery to formal urban markets like Durban financially unsustainable, especially without subsidies or cooperative arrangements. The long distances noted in areas such as kwaJobe (60 km) and eManyiseni (80 km) to Jozini town reveal how even accessing local aggregation points can be a major hurdle, let alone reaching national supply chains. Moreover, this underlines

the structural exclusion of small-scale farmers from formal market value chains. Participation in these markets is conditional upon fulfilling technical and compliance requirements, including environmental regulations (chemical storage, field sanitation) and business training. Many rural small-scale farmers struggle to meet these requirements due to inadequate institutional support and insufficient access to resources, thus reinforcing both economic marginalization and historical inequalities in land ownership and market participation.

These findings indicate that transportation for small-scale farmers presents itself as both a logistical issue and a determinant of whether small-scale farmers can access and participate in formal markets. Inadequate infrastructure, long distances, and high transport costs, coupled with broader systemic barriers, keep formal market participation out of reach for many.

4.3. Market Contracts and Organizational Capacity in Enhancing Market Access

Market contracts and organizational capacity are crucial in coordinating small-scale farmers' access to formal markets, providing stability, predictability, and an essential framework for sustained market participation. Contracts with institutions such as sugar mills offer guaranteed supply channels and fixed prices, while organizational capacity allows farmers to organise production, develop strategic plans, and engage effectively with formal buyers. However, despite these potential advantages, many small-scale farmers continue to face challenges that undermine their ability to access markets reliably. These include inconsistent supply patterns, weak organizational structures, and limited strategic planning, which collectively hinder their integration into competitive market systems.

Government officials in the agricultural sector expressed a different view from small-scale farmers in cooperatives, stating that.

Agri-advisor SI-3 said.

SI-3: *"Our farmers face market access constraints. Markets are available; however, the challenge lies in connecting farmers with them. We have tried connecting farmers with formal markets such as Spar and Boxer. The issue here is that our farmers' supply is inconsistent, which these markets require. Additionally, farmers produce the same crops simultaneously, leading to oversaturation of certain produce in the markets. While they can access formal markets, not all benefit from them since these markets can only accommodate a limited supply. For example, in January 2024, many farmers planted butternut, resulting in oversaturation. Consequently, they are forced to sell at lower prices. Farmers often do not understand why they receive lower prices. These are significant challenges. Farmers need production plans to prevent oversaturated markets, diversify crops, or produce during months when demand is higher."*

This account underscores a fundamental issue: while formal markets are technically accessible, small-scale farmers struggle to meet the consistent supply demands and quality standards required by these outlets. The official notes that farmers often produce the same crop at the same time, such as farmers planting butternut in January 2024, resulting in an oversaturation in markets, reduced prices, and an overall financial loss. Small-scale farmers' knowledge inadequacy regarding market forces perpetuates the issue, with many farmers revealing they are confused about why abundant supply yields depressed market values. These patterns reflect broader structural and behavioral gaps in market literacy and strategic planning.

The challenges identified by this participant reveal a dire need for capacity-building interventions that are targeted at improving production planning. Strategic shifts such as crop diversification, staggered planting schedules, and aligning harvests with market demand could enable farmers to avoid market gluts and enhance their competitiveness. The experience highlights the importance of moving beyond physical access to markets toward a more nuanced understanding of market readiness and alignment.

Another DARD official in management said.

SI-7: *"Market access in Jozini is twofold. Formal markets are available but not sustainable for farmers since they have no contracts with markets. Farmers are also not well organized for available markets. They sometimes have surplus produce, and their produce isn't taken. Moreover, when they are connected with bigger markets, farmers are reluctant to sign contracts because they do not believe they will be able to supply efficiently and consistently."*

This view reveals how the absence of formal market contracts, coupled with poor organizational structures, results in unsustainable conditions for long-term market engagement. The participant emphasizes that farmers often experience surplus production; however, surplus production results from poor planning, and when demand is not met or is misaligned, markets reject these surpluses, leaving farmers with unsold produce. This is indicative of market volatility and the lack of adaptive strategies among farmers. The reluctance of farmers to engage with formal contracts is driven by fears of their inability to fulfill obligations, reflecting deeper issues of trust, perceived risk, and limited production confidence.

These insights suggest that the barriers to market access are not solely infrastructural or logistical but are also institutional and psychological. Farmers' uncertainty about their ability to meet contractual obligations reveals a broader vulnerability linked to insufficient support systems and underdeveloped cooperative governance. The absence of reliable organizational structures not only reduces market credibility but also weakens bargaining power, leaving small-scale farmers at the mercy of volatile informal markets.

4.4. Market Saturation and Logistical Constraints

Market saturation and logistical constraints significantly limit small-scale farmers' capacity to engage consistently and effectively with formal markets. While informal markets offer an accessible outlet for agricultural produce, they are frequently oversaturated, leading to reduced demand, post-harvest losses, and income instability. These dynamics

exacerbate the asset vulnerabilities of small-scale farmers, particularly regarding physical, financial, and institutional assets as conceptualized within the Asset Vulnerability Analytical Framework (AVAF).

A small-scale study from FG-5 noted that:

FG-5: *“Livestock (goat, sheep, cows, and piggy) producers have no markets at all. It is better for crop producers because they sell to the street vendors in Jozini town. There was, however, once a time when we produced tons of cabbages, but they rotted in our plots because even the informal markets, which are overly saturated, could not buy from us. If we are lucky, we also have people driving by who stop and buy from us.”*

This statement illustrates the direct consequences of informal market saturation namely, unsold produce and income loss even among farmers who manage to access informal trading spaces. The absence of key physical assets such as cold storage facilities, efficient transport, and market-linked infrastructure intensifies these losses, as farmers are unable to preserve or redirect excess produce to more lucrative or distant markets. Without these enabling assets, the transition to formal market channels, which demand timely delivery, volume consistency, and quality assurance, remains out of reach.

The economic repercussions of informal market saturation further diminish farmers' financial assets. Income instability discourages reinvestment in improved inputs, production planning, or infrastructure upgrades—essential components for meeting the standards and supply consistency demanded by formal markets. Moreover, the inability to secure reliable returns disincentivizes risk-taking or diversification, reinforcing subsistence-level production and perpetuating financial vulnerability.

A small-scale farmer from FG-4 said.

FG-4: *“Livestock producers (goat, sheep, cows, and piggy) only have access to the informal market. We do not have the kind of cattle that is suitable for the bigger markets, so we sell what we have to each other, our neighbors, and people who wish to buy in town. For crop production, we sell to street vendors, and we sometimes have people come down from Mtubatuba and Johannesburg to purchase our produce.”*

This narrative reveals not only the absence of appropriate livestock breeds linked to limited physical and financial assets but also a broader institutional disconnect. Farmers' inability to meet formal market requirements stems in part from inadequate access to veterinary services, breeding programmes, animal certification systems, and extension support. These are all institutional assets that, if supported, could foster farmers' alignment with formal market requirements and expectations.

Moreover, farmers' dependence on informal markets/buyers such as neighbors, street vendors, and occasional urban traders underlines the absence of formal contractual relationships or collective marketing structures that might otherwise facilitate consistent supply and quality control. This institutional gap results in disjointed, unpredictable market engagement, undermining farmers' ability to establish credibility with formal buyers who typically require guarantees of volume, quality, and delivery reliability.

The saturation of local markets and lack of logistical capacity also weaken the strategic flexibility of farmers. Farmers are unable to time their sales according to favourable market conditions nor reach distant but profitable markets due to limited challenges such as limited storage and inadequate transportation infrastructure. This inflexibility minimizes their ability to bargain and exposes them to exploitative pricing and opportunistic trading arrangements, further weakening their financial and institutional positioning.

Market saturation and logistical constraints reinforce small-scale farmers' vulnerability by not only limiting their ability to sell their surplus in informal markets but also structurally preventing their access to and participation in formal markets. The lack of essential physical infrastructure, the erosion of financial resilience, and the lack of institutional integration further contribute to small-scale farmers being effectively excluded from consistent and beneficial engagement with formal market actors. Addressing these interrelated constraints requires a multi-dimensional policy response that strengthens farmers' asset base across all three domains outlined by the AVAF physical, financial, and institutional to enable more equitable and sustainable market access.

5. DISCUSSION OF FINDINGS

This study analyzed the multidimensional barriers faced by small-scale farmers in accessing formal markets and the implications for their livelihoods and food security. The study found that market exclusion is not solely influenced by geographical location or availability but is also shaped by systemic, structural, institutional, and social constraints that reinforce vulnerability and dependence on informal markets. Both small-scale farmers and government officials consistently noted that limited production capacity and physical distance are major barriers to formal market access. While some farmers occasionally sold to urban buyers in KwaZulu-Natal, Gauteng, and beyond, these relationships were unstable and depended on fluctuating yields. Many farmers were excluded from formal agreements due to an inability to guarantee a consistent supply, resulting in irregular income and diminished bargaining power. This finding supports Ruwanza, Thondhlana, and Falayi (2022), who note that small-scale farmers are often excluded from formal markets due to their inability to meet the volume, quality, and consistency requirements of these markets. Similar findings are noted by Dey, Gandhi, and Debnath (2021) in their study on farmers' participation in India's markets, where they found that small-scale farmers are continuously excluded from structured market contracts due to their inability to supply consistently and the lack of economies of scale.

Quality standards present a further hurdle. The quality of produce often fails to meet the standards required by formal market buyers, resulting in farmers being forced to sell within their local communities at reduced prices or even at a loss. This is particularly evident among livestock (goat, sheep, cows, and piggy) farmers, who are unable to meet the requirements of larger markets, forcing them to sell at a loss. As Smidt and Jokonya (2022) and Gwiriri et al. (2019)

argue, small-scale farmers are often excluded from formal markets due to their inability to meet the volume, quality, and consistency requirements of these markets. Without support to meet these standards, farmers remain confined to informal markets where prices are lower and demand is more uncertain. Similar sentiments are echoed by [Nguyen et al. \(2023\)](#) in their study on goat production in Vietnam, where they found that, due to hygiene and quality compliance challenges, small-scale livestock producers were rejected from participating in formal markets.

Infrastructural challenges also emerged prominently. Poor roads and a lack of transport made it difficult to move produce to formal markets, especially over long distances. These logistical constraints increased costs and discouraged participation in more lucrative channels. This aligns with findings from [Woodhill, Hasnain, and Griffith \(2020\)](#) and [Borsellino, Schimmenti, and El Bilali \(2020\)](#), who highlight how infrastructure deficits disproportionately affect rural producers by narrowing their market options.

Low production capacity linked to constrained access to land, water, inputs, and storage further limited farmers' ability to scale up. Irrigation infrastructure was notably lacking, leaving farmers vulnerable to erratic rainfall and unable to produce consistently. [Kom, Nethengwe, Mpandeli, and Chikoore \(2020\)](#) similarly argue that market access is contingent on the availability of productive assets that enable reliable output. The work of [Digal et al. \(2024\)](#) in the Philippines mirrors this, where they found that small-scale farmers' ability to produce reliably for markets was greatly affected by inadequate irrigation systems and limited access to post-harvest facilities. The findings indicate that these constraints directly threaten both household income and food security.

Cooperatives were seen by some as potential vehicles for market access, particularly where they enabled shared transport and group selling at auctions. However, others reported weak leadership, internal disputes, and a lack of external support, limiting cooperative effectiveness. This is in line with [Myeni, Moeletsi, Thavhana, Randela, and Mokoena \(2019\)](#) and [Nilsson \(2023\)](#) argue that many cooperatives fail to reach their full potential due to internal conflicts and a lack of proper management. In the same breadth, in Bangladesh, [Hossain \(2023\)](#) noted that the effectiveness of small-scale farmer cooperatives in linking them to formal markets was affected by poor institutional support and leadership inadequacies. In this regard, the research contributes a nuanced understanding of how cooperatives, despite their potential, are not a panacea for the market access challenges faced by small-scale farmers.

Social capital also played a role in market engagement. Farmers who had built relationships with informal buyers such as butchers and vendors, often benefiting from repeat business and advance orders, found these informal arrangements provided some stability. However, they lacked price security and did not facilitate long-term growth. As [Myeni et al. \(2019\)](#) caution, while informal ties can support subsistence and survival, over-reliance on them can entrench vulnerability without broader institutional reform. Furthermore, social capital does not address systemic issues such as infrastructure, logistical support, and policy gaps that perpetuate the exclusion of small-scale farmers from formal markets.

A key finding was the uneven distribution of market opportunities. Farmers closer to auction facilities or infrastructure had greater access to formal buyers, while those in remote areas remained dependent on low-return local markets. Barriers such as auction membership restrictions and long travel distances excluded many. This spatial inequality reflects broader structural disparities in the rural economy, as noted by [Reddy \(2025\)](#), who highlights policy failures in addressing institutional fragmentation and rural marginalization.

Overall, the study shows that formal market access is shaped by a complex interplay of production, infrastructure, quality standards, institutional support, and collective organization. Farmers lacking these enabling conditions remain economically and nutritionally vulnerable. A systemic approach targeting infrastructure investment, extension services, farmer training, and cooperative strengthening is required. Without such interventions, small-scale farmers will remain excluded from South Africa's formal agricultural economy, undermining efforts to achieve inclusive rural development and food security.

6. LIMITATIONS

This study is context-specific, drawing on data from the rural municipality of Jozini, which limits the transferability of findings to regions with different socio-economic, infrastructural, or institutional conditions. While the inclusion of farmers, cooperative leaders, and government advisors provided diverse perspectives, the absence of formal market actors such as processors, retailers, and buyers constrains a fuller analysis of the agricultural value chain.

7. CONCLUSION

This study investigated the underlying factors driving small-scale farmers' reliance on informal markets in Jozini, revealing that limited production capacity, inadequate infrastructure, stringent quality requirements, lack of institutional support, and weak cooperative structures significantly constrain access to formal markets. These barriers not only limit income stability but also deepen farmers' vulnerability and food insecurity, reinforcing dependence on informal trading networks. The discussion demonstrated how spatial inequality, governance challenges within cooperatives, and poor access to productive assets intersect to marginalize rural farmers from formal value chains. While informal markets provide short-term relief, they do not offer the economic resilience needed for sustainable development. As such, the study recommends a multi-pronged approach including targeted investment in rural infrastructure, support for cooperative governance, access to training and veterinary services, and improved financial inclusion. These interventions are essential for enabling small-scale farmers to meet formal market standards, strengthen bargaining power, and achieve long-term food and livelihood security within South Africa's evolving agricultural landscape. The findings and recommendations of this study hold relevance beyond the South African context, offering insights for wider global efforts aimed at inclusive market access and improved rural development,

with wider global trends in rural development, such as institutional reform, climate-resilient farming, and market integration.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

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