

Entrepreneurial Procurement Practices in Agribusiness: Challenges and Opportunities in Kilolo District, Tanzania.

Yohana Tweve 1, Bariki Christopher Koka 2 and Letus George Mwallo 3

1 Department of Management Sciences and Procurement, Ruaha Catholic University. Iringa, Tanzania.

yohanatweve@yahoo.com

2 Department of Management Science and Procurement, Ruaha Cathoric University (RUCU). Iringa , Tanzania.

barikikoka@gmail.com

3. Department of Procurement and Logistic Management, Tanzania Institute of Accountance(TIA). Kigoma Campus, Kigoma, Tanzania.

letusgeorge@gmail.com

Abstract: *This study aimed to explore the procurement practices, challenges, and opportunities in agribusinesses within Kilolo District, Tanzania, focusing on procurement efficiency, stakeholder support, access to financial resources, technological innovations, and sustainability practices. The study adopted a mixed-methods approach, combining both qualitative and quantitative research techniques to comprehensively explore the entrepreneurial procurement practices in agribusinesses. A total of 120 respondents, including farmers, cooperative leaders, suppliers, government officials, and NGO representatives, were surveyed to gather data on the state of agribusiness procurement in the region. The findings revealed that procurement efficiency was a critical factor in agribusiness success, with a notable proportion of respondents facing delays and challenges in timely procurement. Financial constraints, logistical barriers, and unreliable suppliers were identified as major obstacles to smooth procurement processes. Moreover, while technological innovations like mobile payment systems and digital platforms showed promise, their adoption was limited. The study also highlighted the low levels of engagement in sustainable sourcing and waste management practices, primarily due to financial constraints and lack of awareness. Stakeholder support from local cooperatives, the government, and NGOs was considered vital for the growth of agribusinesses, yet challenges in collaboration and resource allocation persisted. The study concluded that improving procurement efficiency, enhancing access to financial support, promoting technological adoption, and fostering sustainable practices were essential for boosting agribusiness growth in Kilolo District. Based on these findings, the study recommends enhancing financial services, strengthening stakeholder collaboration, investing in rural infrastructure, and providing education and incentives for sustainable practices. These recommendations aim to support the long-term viability and growth of agribusinesses in the region and related areas.*

Keywords: Agribusiness procurement, Procurement challenges, financial support, Technological innovations, Sustainability practices.

1. Introduction

Entrepreneurial procurement practices play a pivotal role in shaping the success of agribusinesses, particularly in rural economies such as Kilolo District, Tanzania. These practices determine the efficiency, sustainability, and competitiveness of agribusiness operations. Globally, entrepreneurial procurement has been recognized as a driver of economic growth, yet its adoption varies significantly across regions. In Africa, agribusinesses have embraced procurement through cooperatives and partnerships, but challenges persist due to infrastructural and financial limitations. In Tanzania, while government initiatives have sought to promote agribusiness development, gaps remain in supporting efficient procurement practices. This study explored procurement practices in Kilolo District, identifying challenges and opportunities to enhance efficiency and sustainability within the local agribusiness sector.

The transformation of agribusiness through sustainable practices and technological innovations is reshaping the agricultural sector globally. Supermarkets in Africa have revolutionized food retail, presenting opportunities and challenges for producers, particularly small-scale farmers who must adapt to new procurement systems and quality standards [1]. Agribusiness entrepreneurship plays a crucial role in improving agricultural productivity, food security, and income for rural populations in developing countries, although it faces challenges such as greenhouse gas emissions [2]. To address these issues, the integration of sustainable technologies like precision farming, biotechnology, and renewable energy sources is enhancing resource efficiency and system resilience. However, the adoption of these innovations comes with challenges, including investment costs and regulatory difficulties. Collaborative efforts across the agribusiness value chain are essential for promoting sustainability and adapting to the evolving dynamics of the sector [3].

Procurement in agribusiness is evolving globally, with developed economies leveraging technology for strategic supply chain management [4]. However, developing countries face significant challenges in implementing effective procurement systems [5]. These challenges include limited recognition of procurement's importance, unethical behavior, poor supplier service, and inadequate regulatory environments [5]. Supply chain management (SCM) in agribusiness involves managing relationships between businesses to meet consumer requirements efficiently [6]. As developing countries enter global markets, they face increasing competition, necessitating improvements in agricultural production and marketing systems [6]. Digitization of procurement processes can yield benefits such as supporting complex decision-making and enabling procurement to focus on strategic activities [4]. To strengthen the agribusiness subsector in developing nations, there is a need for coordination of processes and activities within and between firms in the supply chain [7].

Agriculture remains a crucial sector in African economies, contributing significantly to GDP and employment [8]. However, the sector faces challenges such as low productivity, limited value addition, and high post-harvest losses, estimated at 30% of total production [8]. Inefficient supply chains and procurement processes contribute to these issues[9]. To address these challenges, innovative technologies like blockchain and cloud computing offer potential solutions. Blockchain can reduce transaction costs and improve supply chain efficiency by enabling trust in digital data [10]. Cloud computing can facilitate real-time information sharing, coordination, and collaboration among supply chain partners, potentially improving economic conditions in developing countries [11]. These technologies could help overcome issues such as fragmented supply chains, limited access to quality inputs, and inadequate infrastructure, which currently hinder procurement efficiency in African agriculture [9];[11].

Digital innovations are transforming African agribusiness, with mobile-based platforms emerging to connect farmers, suppliers, and buyers [12]. These technologies aim to improve market access, reduce costs, and increase efficiency in procurement [13]. Services like mobile information systems, early warning systems, and warehouse receipt systems are being introduced in some African countries[13]. However, adoption remains limited due to challenges such as poor infrastructure, low digital literacy, and insufficient funding [13, 14]. Text and voice-based services for mobile phones are the main ICT technologies adopted, while radios continue to play a crucial role in disseminating agricultural information[14]. To fully leverage these innovations, African governments and organizations need to prioritize digitalizing the agriculture sector and integrate it into economic development plans [15].

Smallholder agriculture plays a crucial role in East African economies, including Tanzania, accounting for about 75% of agricultural production and employment [16]. However, these farmers face significant challenges, including limited access to markets, credit, and agricultural information[17]. The agricultural sector in Tanzania contributes approximately 30% to GDP and employs 65-70% of the population [18]. Despite its importance, agriculture has failed to become an engine of growth due to constraints along the value chain, such as land tenure issues, poor market access, and climate change risks [18]. Insufficient physical infrastructure, lack of know-how and capital, and weak institutional frameworks are major impediments to agricultural trade in Tanzania[19]. To improve the situation, strategies should focus on enhancing market access, promoting farmers' organizations, and strengthening the institutional framework to support fair trade practices [18, 19].

Kilolo District, located in the Iringa Region of Tanzania, exemplifies the challenges faced by rural agribusinesses in the country. The district is known for the production of crops such as maize, beans, and horticultural products, which are essential for both local consumption and export. However, procurement inefficiencies, high input costs, and inadequate infrastructure continue to undermine the competitiveness of agribusinesses in the district. For instance, farmers and agribusiness owners often struggle to source quality seeds, fertilizers, and pesticides at affordable prices, leading to suboptimal production and reduced profitability.

Research on procurement practices in Tanzania reveals both challenges and opportunities for improvement. Rural farmers face difficulties in managing agricultural knowledge and accessing resources, but cooperatives offer potential for pooling resources and sharing best practices [20]. Public procurement reforms have made progress in transparency and efficiency, though compliance issues persist[21]. The global supply chain in Tanzania faces problems such as outdated technology, lack of trust, and counterfeit products [22]. However, collaborative procurement practices present opportunities for public organizations, offering benefits like lower prices, reduced costs, and improved product quality. Challenges include demand heterogeneity and inflexibility, but clear guidelines can help ensure successful implementation [23]. Overall, while procurement in Tanzania faces significant obstacles, there are emerging strategies and initiatives that could enhance efficiency and effectiveness in both public and private sectors.

The global shift towards sustainable and inclusive procurement presents opportunities for agribusinesses to enhance their market position and attract investment. Sustainable procurement practices, such as sourcing from certified suppliers and adopting environmentally friendly methods, can improve organizational efficiency, reduce waste, and mitigate supply chain risks[24]. However, implementing sustainability standards may inadvertently

exclude some small-scale farmers, particularly in developing countries [25]. To promote inclusive growth, governments must create enabling environments by addressing constraints in agricultural value chains and providing critical infrastructure [26]. Sustainability reports are increasingly important for managing social and environmental impacts in global supply chains, allowing companies to respond to consumer expectations for more sustainable products. However, challenges remain due to the voluntary nature of reporting, lack of standardization, and high implementation costs [27].

While global research on agribusiness procurement primarily focused on large-scale operations in urban or peri-urban areas, limited attention had been given to entrepreneurial procurement practices in rural regions like Kilolo District, Tanzania. Existing studies in rural contexts often highlighted logistical challenges, inadequate infrastructure, and restricted market access, but few explored how innovative and entrepreneurial strategies had been utilized to address these issues. In Tanzania, most research emphasized agricultural productivity and supply chain management, while the strategic role of procurement in enhancing the competitiveness and sustainability of rural agribusinesses remained overlooked. This study addressed a critical gap by examining how agribusinesses in Kilolo District adopted entrepreneurial procurement strategies to overcome challenges such as unreliable suppliers, fluctuating input prices, and limited access to technology. It also investigated emerging opportunities, including digital platforms, cooperative purchasing, and public-private partnerships, which had often been neglected in most of the existing literature.

This study sought to investigate entrepreneurial procurement processes in emerging countries, with an emphasis on the constraints and opportunities that agribusinesses face. It attempted to examine enterprises' procurement methods for acquiring agricultural supplies and services while taking into account resource limits and market dynamics in a rural context. The study also sought to identify procurement difficulties such as logistical impediments, financial limits, and unreliable suppliers, as well as to investigate new methods to increase procurement efficiency, such as digital platforms, cooperative purchasing, and public-private partnerships. Another significant goal was to assess the involvement of stakeholders such as government agencies, financial institutions, and development organizations in promoting procurement procedures. The study sought to provide actionable recommendations to improve procurement processes, promoting the growth, competitiveness, and sustainability of agribusinesses in Kilolo District. In the end, it sought to demonstrate how procurement could be a strategic tool for agricultural development in rural Tanzania.

The significance of this study lies in its contribution to understanding entrepreneurial procurement practices in rural

agribusinesses, particularly in rural areas. By focusing on this underexplored area, the study provides insights into how small-scale agribusinesses can optimize procurement processes to improve efficiency, reduce costs, and enhance productivity despite resource constraints. The research fills a gap in existing literature, which predominantly focuses on large scale operations and urban settings, offering a new perspective on rural procurement challenges. It also identifies key challenges such as logistical, financial, and technological barriers, providing actionable recommendations for overcoming them. The study explores innovative solutions like digital platforms and cooperative purchasing, which can drive efficiency and improve market access. Additionally, it examines the role of stakeholder's government, financial institutions, and development organizations in supporting procurement practices. The findings aim to inform policy and business strategies, contributing to the sustainability and growth of rural agribusinesses.

The remaining part of this paper is arranged as follows: Methodology of the study is in section 2, section 3 contains results and discussion of the study, while conclusion and recommendations are presented in section 4 followed by acknowledgement in section 5.

2. Methodology

This study adopted a **mixed-methods approach**, combining both qualitative and quantitative research techniques to comprehensively explore the **entrepreneurial procurement practices** in agribusinesses within Kilolo District, Tanzania. The research aimed to understand procurement strategies, challenges, and opportunities, as well as the role of key stakeholders in supporting these practices.

2.1 Research Design

A **descriptive research design** was used to analyze procurement practices and identify the factors that influenced the efficiency of agribusiness procurement in Kilolo District. This design allowed for a detailed exploration of the challenges faced by small-scale agribusinesses and the innovative strategies they employed to address these challenges.

2.2 Study Population and Sample

The study targeted agribusinesses in Kilolo District, including smallholder farmers, agricultural cooperatives, and local suppliers. A sample size of 120 respondents was chosen, consisting of 100 agribusiness owners and managers and 20 key stakeholders, including government officials, representatives from financial institutions, suppliers and NGO representatives. Stratified random sampling was used to

ensure that different categories of agribusinesses were represented in the sample, including smallholder farmers, cooperatives, and agro-suppliers.

2.3 Data Collection Methods

Structured questionnaires were administered to 100 agribusiness owners and managers. The questionnaires included both closed and open-ended questions to capture quantitative data on procurement practices, challenges, and the adoption of innovative procurement strategies. Semi-structured interviews were conducted with 20 key stakeholders, including government representatives, financial institutions, and development organizations. The interviews provided qualitative insights into how these stakeholders supported agribusiness procurement and identified opportunities for improvement. And Focus group discussions were conducted with groups of agribusiness owners, cooperative members, and suppliers. These discussions aimed to gather collective insights into procurement challenges and to explore innovative solutions. Focus groups allowed for deeper engagement with participants, encouraging dialogue about community-level procurement practices.

2.4 Data Analysis

The survey data were analyzed using descriptive statistics, including frequencies, percentages, and mean scores, to summarize procurement practices, challenges, and innovative solutions. The SPSS software was used for this analysis to generate clear patterns and trends in the data. The interview and focus group data were analyzed through thematic analysis. Thematic coding was used to identify key themes and patterns related to procurement strategies, challenges, and innovation.

To ensure the validity and reliability of the findings, triangulation was applied by comparing and cross-referencing data from surveys, interviews and focus groups. This helped strengthen the conclusions and provided a more significant understanding of procurement practices.

2.5 Ethical Considerations

The study adhered to ethical research standards, ensuring that participants' confidentiality and privacy were maintained. All respondents were informed about the study's purpose and scope, and informed consent was obtained before data collection. Participation was voluntary, and respondents were assured that their answers would be kept confidential. No harm was expected to result from participation, and the findings were to be used solely for academic and research purposes.

2.6 Limitations

Although the sample size of 120 respondents provided a solid representation of agribusinesses in Kilolo District, it may not capture every possible variation in procurement practices across the entire district. The reliance on self-reported data from surveys and interviews may have introduced some biases, as respondents might have provided socially desirable answers. However, the use of triangulation and multiple data sources helped to mitigate these biases.

3. Results and Discussion

In this section the results and discussion of the findings are presented, beginning with simple demographic information of 120 respondents followed by discussion on main indicating factors in the form of procurement practices, challenges in procurement, technical innovations, access to finance, stakeholders support, procurement efficiency and sustainability practices.

3.1 Demographic Information of Respondents

This part presents general information of respondents such as gender of the respondents, respondent's age group, education level, respondent's occupations and Years of experience in agribusiness which was approached with interview and questionnaires.

3.1.1 Respondent's Gender

The study examined gender representation among agribusiness stakeholders in Kilolo District, revealing that 60% of the respondents were male and 40% were female. This distribution highlighted a gender imbalance that has historically characterized many agricultural and business sectors in developing regions. Male respondents often played dominant roles in procurement activities, a reflection of traditional societal norms that positioned men as decision-makers in financial and logistical matters. Procurement processes often involved negotiating prices and arranging transport, tasks traditionally perceived as male responsibilities within the community.

Female respondents, while fewer in number, demonstrated a growing presence in agribusiness, particularly in decision-making roles within cooperatives or as independent entrepreneurs. Despite their lower representation, women consistently faced unique challenges, such as limited access to financial resources and decision-making platforms. Efforts to address this gender disparity have gained traction, particularly through programs led by NGOs and cooperatives aimed at empowering women in agribusiness. These initiatives have sought to provide women with financial support, capacity building, and networking opportunities to enhance their involvement in procurement activities.

Despite these initiatives, much work remained to ensure equal opportunities for both genders. The findings show the importance of fostering gender inclusivity in procurement processes to harness the full potential of agribusiness in

Kilolo District. Achieving this would require collaborative efforts to eliminate structural barriers, create equitable access to resources, and promote women's active participation in agribusiness decision-making

Table 1: Demographic information's of respondents.

Demographic Variable	Category	N/Respondents	(%)
Gender	Male	72	60%
	Female	48	40%
Age Group	18–30 years	18	15%
	31–45 years	54	45%
	46–60 years	36	30%
	Above 60 years	12	10%
Educational Level	Primary Education	36	30%
	Secondary Education	48	40%
	Tertiary Education	24	20%
	No Formal Education	12	10%
Occupation	Farmers	90	75%
	Cooperative Leaders	10	8.3%
	Suppliers	12	10%
	Government Officials	6	5%
	NGOs Leaders	2	1.7%
Experience in Agribusiness	Less than 5 years	30	25%
	5–10 years	54	45%
	Over 10 years	36	30%

3.1.2 Age groups of respondents

The study analyzed the age distribution of respondents involved in agribusiness procurement as shown in table 1. The largest age group, accounting for 45% of the respondents, comprised individuals aged 31–45 years. This group represented the most active participants in procurement activities, reflecting their position at the peak of their working and entrepreneurial lives. Many in this category had accumulated significant experience and resources, enabling them to engage in effective procurement practices.

The age group 46–60 years constituted 30% of the respondents. These individuals often held leadership roles within cooperatives or local agribusiness ventures, leveraging their experience to influence procurement decisions. Their involvement highlighted the critical role of experienced stakeholders in ensuring operational continuity and knowledge transfer in agribusiness.

Younger respondents aged 18–30 years formed 15% of the sample. Although less represented, this group brought innovation and adaptability to procurement practices, often exploring digital platforms and modern approaches. However, their limited access to resources and lack of experience posed challenges to their participation.

The smallest group, those above 60 years, accounted for 10% of respondents. This demographic contributed primarily in advisory roles, offering insights and strategies based on their extensive experience. The age distribution illustrated a

balanced integration of energy, innovation, and experience among stakeholders, ensuring diverse contributions to agribusiness procurement processes.

3.1.3 Education Level of Respondents

The study examined the educational levels of respondents involved in agribusiness procurement, revealing a diverse range of academic backgrounds. The majority, 40%, had attained secondary education, demonstrating the significant role of basic literacy and numeracy skills in enabling effective participation in procurement activities. Individuals in this group often managed small to medium-scale agribusinesses, using their education to engage in basic record-keeping, communication with suppliers, and price negotiations.

Respondents with primary education accounted for 30% of the sample. While their educational attainment was limited, they actively participated in procurement processes, relying more on practical knowledge and experience. Many in this group faced challenges such as limited understanding of formal contracts or financial documentation, which occasionally hindered their ability to scale their operations.

Those with tertiary education comprised 20% of the respondents. This group brought advanced skills, including strategic planning, financial management, and familiarity with digital procurement tools. They often occupied leadership roles within cooperatives or managed larger agribusiness ventures, contributing to more structured and efficient procurement practices.

The remaining 10% of respondents had no formal education. Their involvement in procurement was largely informal, relying on verbal agreements and community-based networks. This demographic faced the greatest challenges, such as limited access to information and difficulty adapting to modern procurement systems. The findings disclosed the importance of education in enhancing procurement efficiency and fostering agribusiness growth.

3.1.4 Respondent's Occupations

The study explored the occupational distribution of respondents engaged in agribusiness procurement, highlighting that 75% were farmers as shown in table 1. This majority reflected the critical role farmers played as primary producers and end-users in procurement chains. Farmers actively procured seeds, fertilizers, and equipment, often directly engaging with suppliers or cooperatives. Their involvement shows their centrality in sustaining agribusiness activities, despite challenges such as limited bargaining power and financial constraints.

Cooperative leaders constituted 8.3% of the respondents. These individuals played a pivotal role in streamlining procurement processes for their members, negotiating bulk purchases, and ensuring fair pricing. Their participation highlighted the importance of collective efforts in overcoming logistical and financial barriers.

Suppliers accounted for 10% of the respondents, serving as intermediaries in providing essential inputs to farmers and cooperatives. Their role involved managing supply chains, maintaining product quality, and ensuring timely delivery. Suppliers often faced logistical and demand forecasting challenges, which impacted procurement efficiency.

Government officials and NGO leaders formed smaller portions of the respondent base, at 5% and 1.7%, respectively. Government officials were involved in policy implementation and providing subsidies, while NGO leaders supported farmers and cooperatives through capacity building and resource mobilization. This occupational diversity illustrated the interconnected roles of various stakeholders in driving procurement processes within agribusiness.

3.1.5 Respondent's Experience in Agriculture

The study analyzed the experience levels of respondents in agribusiness. Results in table 1 revealing that 45% had been involved for 5–10 years. This group represented the core participants, combining relatively significant experience with active engagement in modern procurement practices. These respondents often demonstrated an ability to adapt to market changes and leverage their growing networks to secure better

deals. Their intermediate experience enabled them to balance traditional practices with emerging trends, such as the use of digital tools for procurement.

Respondents with over 10 years of experience accounted for 30%. This group was often comprised of established farmers, cooperative leaders, and suppliers who had accumulated extensive knowledge of the agribusiness landscape. Their long-term involvement allowed them to manage procurement challenges effectively, such as negotiating with suppliers or navigating economic fluctuations. Many in this category played advisory roles within cooperatives or local farming communities, contributing valuable perceptions and fostering knowledge transfer.

The remaining 25% had less than 5 years of experience in agribusiness. While this group was smaller and less experienced, they brought fresh perspectives and a willingness to adopt innovative approaches. However, they faced significant challenges, including limited access to capital and insufficient knowledge of market dynamics. Their participation shows the need for targeted support to nurture and retain new entrants in agribusiness. Generally, the findings highlighted the diverse experience levels within the sector and the critical contributions of each group to sustaining procurement activities

3.2 Procurement Practices.

Procurement practices in agribusinesses reflected a variety of strategies employed to acquire essential inputs, each shaped by factors such as cost, accessibility, reliability, and the nature of the agricultural business. These strategies included direct purchases, cooperative procurement, third-party supplier arrangements, and the use of formal contracts, alongside varying procurement frequencies. These practices revealed both the adaptability of agribusiness owners and the challenges they faced in sustaining their operations effectively.

As shown in figure 1 the findings result presents a significant portion of respondents, 45%, relied on direct purchases as their primary procurement method. This approach was favored for its simplicity and the immediate availability of goods. Respondents noted that direct purchases allowed them to personally inspect the quality of inputs, negotiate prices, and build direct relationships with suppliers. As one respondent explained:

"Buying directly gives us control over what we get; we can check the quality and ensure we are paying a fair price."

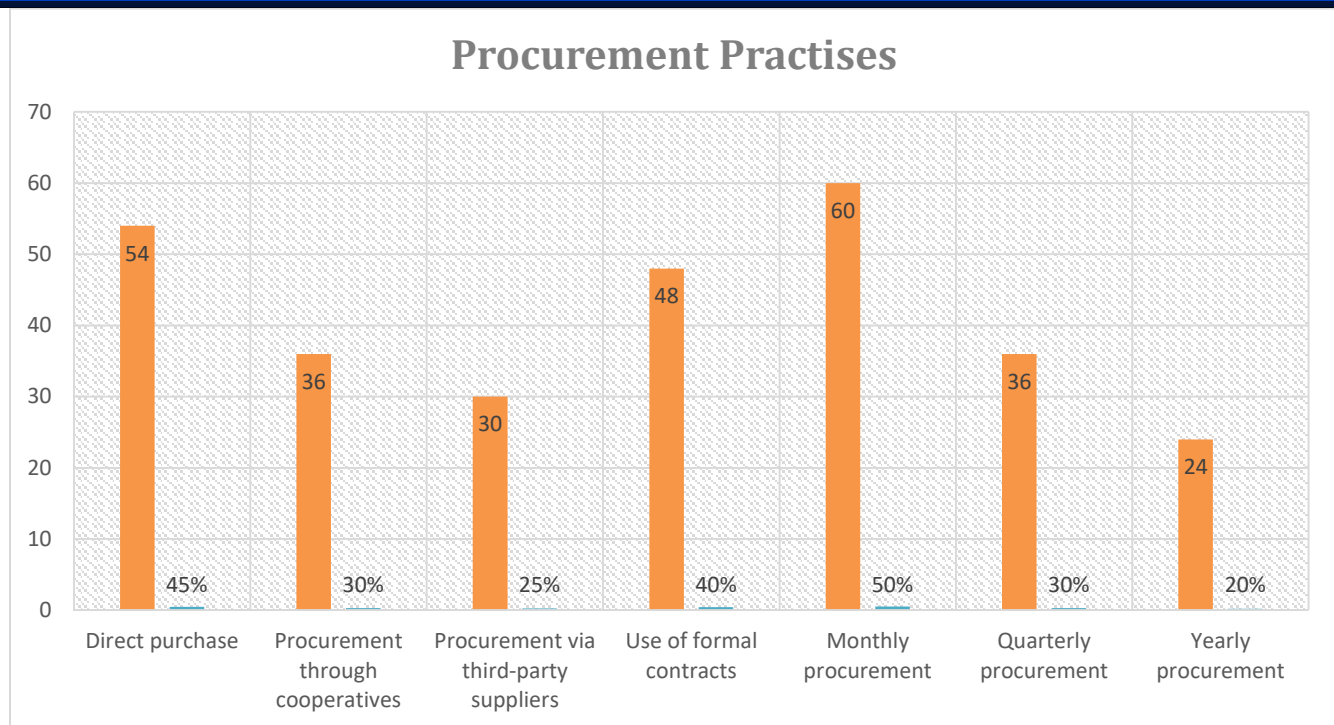


Figure 1; Procurement practices

However, challenges such as fluctuating prices and limited supplier availability during peak seasons were common. These obstacles often forced agribusinesses to search for alternative suppliers or settle for suboptimal inputs, which could compromise their productivity.

Another 30% of respondents reported procuring inputs through cooperatives, a practice appreciated for its ability to pool resources and leverage collective bargaining power. Cooperatives enabled members to access inputs at lower prices and in larger quantities than they could achieve individually. One farmer shared:

“Being part of a cooperative means I can get fertilizers and seeds at prices I can afford, especially when money is tight.”

Despite these advantages, some respondents highlighted inefficiencies within cooperatives, such as delayed deliveries or mismanagement, which sometimes damaged their effectiveness.

Third-party suppliers were utilized by 25% of respondents, particularly those who preferred the convenience of having inputs delivered to their locations. These intermediaries acted as a bridge between manufacturers and smallholder farmers, saving time and reducing logistical burdens. However, concerns about reliability and transparency were frequently cited. A respondent lamented:

“Sometimes the suppliers bring products that don’t meet our expectations, and it’s hard to get a replacement or refund. You just have to manage with what you get.”

Such issues highlighted the risks associated with this approach, despite its convenience.

The use of formal contracts for procurement was adopted by 40% of respondents, reflecting an effort to establish consistent supply chains and foster long-term relationships with suppliers. Formal contracts provided security, especially during times of high demand or market instability. As one agribusiness owner remarked:

“Having a contract ensures that we get what we need when we need it, without worrying about sudden price increases or shortages.”

Contracts also allowed businesses to plan more effectively and allocate resources strategically. However, not all respondents had access to suppliers willing to enter formal agreements, limiting this method’s wider adoption.

In terms of procurement frequency, the most common practice was monthly procurement, reported by 50% of respondents. Monthly schedules aligned procurement activities with cash flow and operational cycles, ensuring that inputs were always available without excessive storage costs. Quarterly and yearly procurement, chosen by 30% and 20% of respondents respectively, were favored by businesses with

stable inventory needs or those looking to minimize transport and administrative expenses. A farmer noted:

“We procure once a year to save on costs and ensure everything is planned well in advance. It works for us because we have proper storage facilities.”

These findings revealed a various procurement landscape in Kilolo District, driven by both necessity and opportunity. The reliance on different practices emphasized the resourcefulness of agribusiness owners in overcoming challenges such as financial constraints, market volatility, and logistical difficulties. These insights provided a foundation for policymakers and stakeholders to tailor support mechanisms to the specific needs of agribusinesses, fostering a more resilient and efficient procurement environment.

3.3 Challenges in Procurement

Challenges in procurement practices among agribusinesses in Kilolo District were universal, reflecting a mix of financial, logistical, and operational difficulties. The results in figure 2 depict that, financial constraints emerged as the most pressing issue, reported by 60% of respondents. Limited access to affordable credit and high interest rates often hindered agribusiness owners from purchasing necessary inputs in adequate quantities or at the right time. A farmer highlighted this challenge, saying:

“It is difficult to buy enough inputs for the season because we lack the funds, and banks require collateral that most of us don’t have.”

This constraint not only delayed procurement activities but also forced many to depend on inferior inputs, impacting their overall productivity.

Logistical barriers, reported by 55% of respondents, further compounded procurement challenges. Poor road infrastructure and unreliable transportation systems often delayed the delivery of agricultural inputs, particularly for those in remote areas. A cooperative leader explained:

“Even when we collectively order inputs as a cooperative, the roads become impassable during the rainy season, and delivery takes weeks longer than expected.”

This problem was particularly severe during peak agricultural periods when delays could disrupt planting schedules, thereby affecting crop yields.

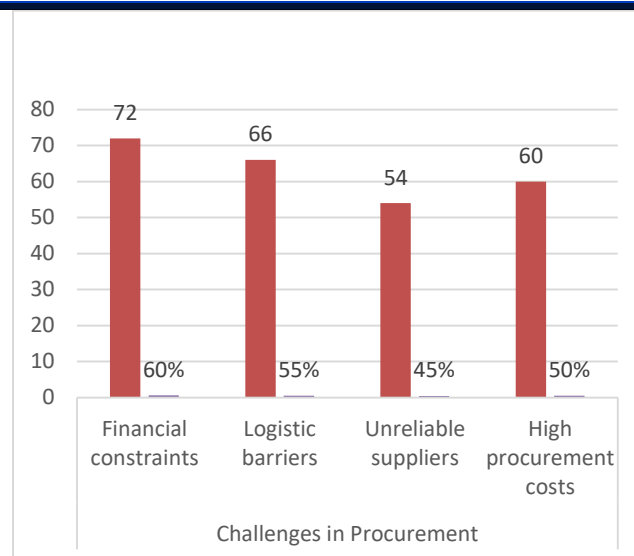


Figure 2: Challenges in procurement.

Unreliable suppliers were another significant issue, affecting 45% of respondents. Many suppliers failed to deliver quality inputs consistently, leading to dissatisfaction and mistrust among agribusiness owners. One supplier acknowledged this challenge, saying:

“Sometimes we face shortages from manufacturers, and we cannot meet the demands of all our clients. It’s not intentional, but it damages relationships.”

These inconsistencies forced agribusinesses to diversify their supply sources, often at the cost of additional time and money.

High procurement costs also posed a critical challenge, as noted by 50% of respondents. Rising costs of inputs and transportation often pushed procurement expenses beyond the reach of small-scale agribusinesses. A farmer remarked:

“Every year, the prices of seeds and fertilizers increase, but our income doesn’t grow at the same rate. It’s becoming harder to stay in business.”

These high costs were intensified by a lack of subsidies or support mechanisms to cushion agribusiness owners from market fluctuations.

The interchange of these challenges highlighted the systemic nature of procurement difficulties in the study area. Financial constraints limited purchasing power, while logistical barriers and unreliable suppliers increased the risks and costs of obtaining inputs. The cumulative effect was a procurement environment that strained the resilience and profitability of agribusinesses. Addressing these challenges required coordinated efforts from financial institutions, government agencies, and other stakeholders to provide financial support,

improve infrastructure, and ensure reliable input supply chains.

3.4 Technological Innovations

Technological innovations played a growing role in shaping procurement practices among agribusinesses in the area, with digital platforms and mobile payment systems emerging as notable advancements. However, their adoption remained limited, reflecting both opportunities and challenges. Results in figure 3 shows that, digital platforms for procurement, utilized by 25% of respondents, provided an efficient means of sourcing inputs by connecting agribusinesses directly with suppliers. Farmers who embraced these platforms emphasized their convenience and ability to offer price transparency. One farmer shared:

“Using a digital platform saves time and lets me compare prices from different suppliers without traveling long distances.”

Despite these benefits, the lack of digital literacy and reliable internet access in rural areas hindered widespread adoption.

The adoption of mobile payment systems, reported by 35% of respondents, revolutionized transactions by offering secure and instant payment options. This innovation reduced the risks associated with carrying cash and facilitated timely procurement. A government official emphasized:

“Mobile payment systems have empowered small-scale farmers to access inputs without the burden of long bureaucratic procedures or physical cash transfers.”

Such systems enabled agribusinesses to build trust with suppliers by ensuring prompt payments, fostering better relationships and supply reliability.

Despite these advancements, challenges persisted, particularly in terms of access and affordability. NGO leaders working in Kilolo District noted that while mobile payment systems and digital platforms held promise, they often required initial investments in technology and training. One NGO leader explained:

“Farmers need support in acquiring smartphones and understanding how to use these platforms effectively. Without this, the digital divide will continue to limit their benefits.”

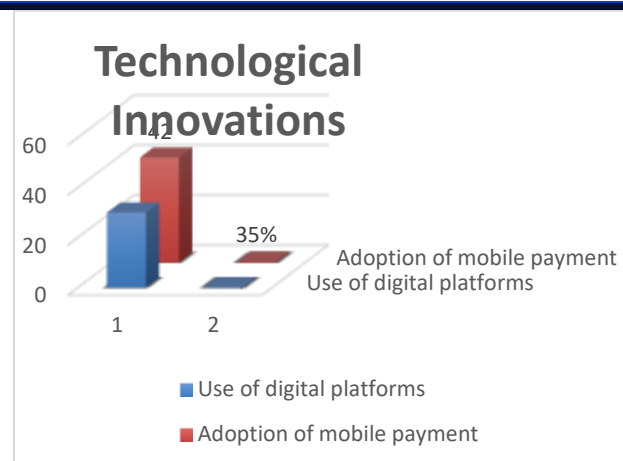


Figure 3: Technological innovation.

These insights showed the need for collaborative efforts between the government, private sector, and NGOs to improve infrastructure, provide digital training, and promote awareness of the advantages of technological innovations in procurement.

3.5 Access to Financial Support

Access to financial support was a critical factor influencing procurement practices in Kilolo District, but its effectiveness was hindered by various challenges. In figure 4 the results demonstrates that, the availability of loans for procurement, reported by only 20% of respondents, highlighted the limited reach of formal credit services. Many agribusiness owners struggled to meet the collateral requirements or navigate the complex application processes associated with obtaining loans. A farmer remarked:

“I approached a bank for a loan to buy fertilizers, but they demanded land title deeds, which I don’t have. Without this, it’s impossible for people like us to get help.”

This exclusion pushed farmers to seek informal borrowing options, often at unfavorable terms that worsened their financial struggles.

Affordable interest rates, cited by just 10% of respondents, remained a persistent challenge for those who managed to secure loans. High rates discouraged borrowing, particularly for small-scale farmers operating on tight margins. A representative from a financial institution acknowledged this issue, stating:

“While we understand the needs of farmers, the risks in agriculture, such as unpredictable weather, force us to set higher rates to cover potential losses.”

This reality left many farmers unable to leverage loans to scale their operations or improve procurement practices, spreading cycles of limited growth and productivity.

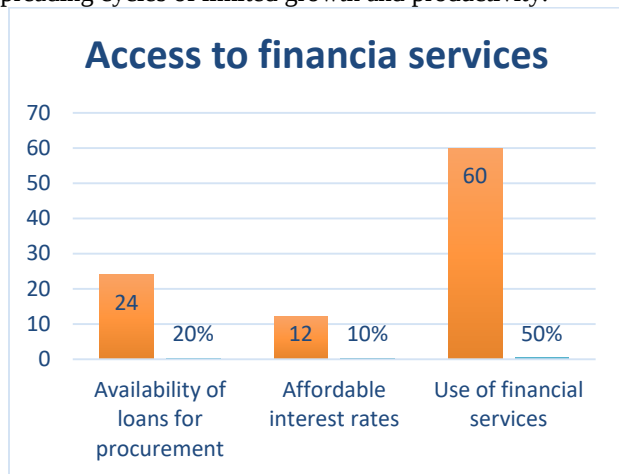


Figure 4: Access to finance.

In contrast, the use of financial services, such as mobile money and banking, was reported by 50% of respondents, reflecting its growing importance in bridging financial access gaps. Mobile money platforms enabled agribusinesses to save, transfer, and receive funds securely and conveniently, reducing dependency on cash transactions. A government official noted:

“The introduction of mobile money has been a game changer for rural farmers, allowing them to transact efficiently without traveling long distances to banks.”

This accessibility empowered many farmers to make timely purchases of agricultural inputs, improving procurement efficiency.

NGOs working in the region actively supported these developments by providing financial literacy training and promoting digital financial solutions. One NGO leader explained:

“Our focus has been on equipping farmers with the knowledge to use mobile money and understand basic banking services. This helps them better manage their finances and access necessary resources.”

However, barriers such as digital illiteracy and limited smartphone penetration remained, particularly in remote areas.

The interaction of these factors highlighted a mixed picture: while mobile money and financial services increased accessibility, the limited availability of affordable loans

continued to constrain the financial capacity of agribusinesses in Kilolo District. Collaborative efforts between stakeholders were needed to address these disparities and foster inclusive financial ecosystems.

3.6 Stakeholder Support

Stakeholder support was integral to addressing procurement challenges, with varying contributions from the government, NGOs, and local cooperatives. Results in figure 5 represents that, government support, reported by 40% of respondents, played a critical role in creating an enabling environment for agribusiness procurement. Initiatives such as subsidized inputs and infrastructure development aimed to alleviate procurement problems. A government official explained:

“We have been working to improve rural roads and provide subsidized seeds to ensure that farmers can access inputs at reasonable costs.”

However, many farmers noted inconsistencies in these efforts, citing delays or inadequate distribution. A farmer shared:

“The government programs are helpful, but sometimes the support comes late or doesn’t reach everyone who needs it. We still struggle to make ends meet.”

NGO support, cited by 30% of respondents, complemented government efforts by focusing on capacity building and financial literacy. NGOs provided training on best procurement practices and facilitated access to digital platforms and financial services. One NGO leader emphasized:

“Our priority has been to empower farmers with knowledge and tools to improve their procurement efficiency. This includes training them on negotiating prices and using mobile platforms to connect with suppliers.”

Despite these efforts, the reach of NGO programs was often limited to areas with ongoing projects, leaving some communities underserved.

The role of local cooperatives, reported by 70% of respondents, emerged as the most significant form of stakeholder support. Cooperatives pooled resources and organized bulk procurement, enabling members to secure inputs at discounted rates and with greater reliability. A cooperative leader highlighted this advantage, stating:

“When we purchase as a group, suppliers are more likely to offer better prices and prioritize our orders. It gives small farmers the bargaining power they wouldn’t have on their own.”

Many farmers echoed this, noting that cooperatives also facilitated access to government and NGO programs, acting as a bridge between individual farmers and larger stakeholders.



Figure 5: Stakeholders support.

While stakeholder support provided vital assistance, gaps remained in coordination and inclusivity. Farmers in remote areas often struggled to benefit from these programs due to strategic challenges or lack of awareness. A representative from a financial institution noted:

“Stakeholder efforts are promising, but there needs to be better alignment between government policies, NGO initiatives, and cooperative activities to ensure broader impact.”

Addressing these gaps required a more integrated approach to maximize the potential of stakeholder support and enhance procurement outcomes for agribusinesses the area.

3.7 Procurement Efficiency

Procurement efficiency significantly influenced agribusiness growth, with timelines for procurement and its impact on business development being crucial factors. Figure 6 shows that, procurement within 7 days, reported by 45% of respondents, was considered ideal for maintaining the continuity of agribusiness operations. A farmer shared:

“When I can get inputs within a week, I can plant on time, ensuring that my crops grow properly and I don’t miss key planting seasons.”

This quick procurement allowed farmers to stay on schedule and optimize their production cycles, which was vital for maintaining steady revenue streams. However, delays were a

frequent concern, and many farmers who did not experience timely procurement faced difficulties in adapting their schedules.

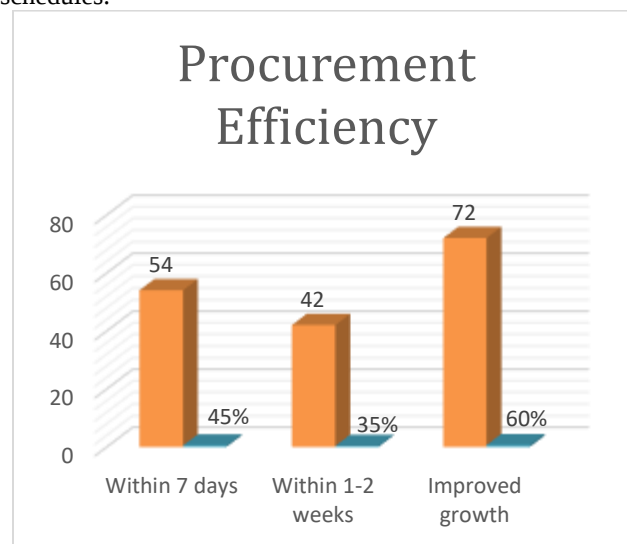


Figure 6: Procurement efficiency.

Procurement within 1-2 weeks, reported by 35% of respondents, was viewed as acceptable but less efficient. A government official noted:

“Although not ideal, a procurement time of one to two weeks is still manageable for many farmers. However, delays beyond that can disrupt planting or harvesting schedules.”

While some farmers accepted this timeframe, others found that waiting longer affected their yields, especially for time-sensitive crops. The government had made efforts to improve procurement speed through subsidies and strategic support, but inconsistencies in delivery persisted, affecting the overall efficiency of procurement processes.

Improved business growth, cited by 60% of respondents, was directly linked to timely procurement. Many farmers and agribusiness owners recognized that having access to inputs when needed led to better crop yields, which translated into higher profits and business expansion. A supplier in the region explained:

“Farmers who procure supplies on time are able to grow their businesses because they avoid delays and get a better harvest. This leads to repeat orders and strengthens relationships.”

Suppliers also noted that efficient procurement allowed them to maintain consistent demand, benefiting both suppliers and farmers.

However, procurement delays were a significant barrier to growth. A financial institution representative remarked:

“The longer procurement takes, the harder it becomes for agribusinesses to access credit and investment. Delayed procurement negatively impacts cash flow and financial planning.”

The need for a more efficient, streamlined procurement process was clear, as businesses that faced delays struggled to grow, while those with timely procurement experienced better business outcomes. This highlighted the importance of reducing delays and improving procurement systems in order to support sustainable growth.

3.8 Sustainability Practices

Sustainability practices in agribusinesses were essential for fostering long-term viability, yet their adoption was limited by various challenges. Use of sustainable sourcing, reported by only 20% of respondents, remained a relatively rare practice. Many farmers continued to rely on traditional sourcing methods, which often prioritized cost over environmental impact. A farmer shared:

“I have heard of sustainable farming practices, but they are expensive, and I can't afford them. I buy the cheapest inputs available to keep my costs low.”

While some progressive farmers explored sustainable options, such as organic fertilizers and local, eco-friendly suppliers, they struggled to make these practices the norm due to limited access to resources and knowledge.

Implementation of waste management was similarly low, with only 15% of respondents actively engaging in waste reduction or recycling initiatives. In many cases, waste from agricultural activities, such as plastic packaging or leftover chemicals, was discarded improperly, leading to environmental degradation. A government official acknowledged the challenge, stating:

“Waste management is a priority for us, but we face barriers in enforcement and public awareness. Many farmers lack the infrastructure or education to dispose of waste responsibly.”

However, some forward-thinking farmers had begun to explore more sustainable ways of managing agricultural by-products, such as composting organic waste for use in their fields. Despite these efforts, these practices were not widespread, and significant challenges remained in achieving widespread adoption.



Figure 7: Sustainability practices

An NGO leader emphasized the importance of providing education and resources for sustainable practices, noting:

“Our organization has been working with local farmers to introduce waste management programs and promote sustainable sourcing, but adoption rates remain low. Financial constraints and lack of awareness are major.”

Financial institutions also had a role to play in promoting sustainability, but, as a representative from one financial institution put it:

“There is limited demand for financial products aimed at supporting sustainable practices. Most farmers are focused on immediate costs, rather than long-term benefits.”

Thus, while sustainability practices showed promise, significant barriers to adoption remained in Kilolo.

4. Conclusion and Recommendations

This study explored the procurement practices, challenges, and opportunities in agribusinesses within Kilolo District, focusing on procurement efficiency, stakeholder support, access to financial resources, technological innovations, and sustainability practices. The findings revealed a mixed landscape in which timely procurement and the involvement of key stakeholders such as cooperatives, government, and NGOs played a crucial role in enabling agribusiness growth. However, significant barriers, such as financial constraints, logistic challenges, unreliable suppliers, and delayed procurement processes, hindered the overall efficiency of agribusiness operations. Moreover, access to financial support remained a challenge, with limited use of financial services like mobile money and banking, which could otherwise support procurement needs.

The study also highlighted that while some farmers engaged in sustainability practices, including sustainable sourcing and waste management, these practices were not widely adopted due to financial and educational barriers. As a result, agribusinesses in Kilolo District faced difficulties in scaling up and optimizing their operations, impacting their growth potential. There was also a notable gap in technological adoption for procurement and waste management processes, further compounding the challenges faced by agribusinesses.

The study recommends the following;

- Financial institutions should develop affordable, flexible loan products tailored to the specific needs of agribusinesses in Kilolo District. Additionally, efforts should be made to increase the use of mobile money and banking services to streamline financial transactions and procurement processes.
- The government, NGOs, and cooperatives should collaborate more closely to align their programs and ensure that farmers and agribusinesses receive the necessary support in a timely manner. This collaboration could improve the efficiency and impact of government subsidies, NGO programs, and cooperative-led procurement initiatives.
- There is a need to encourage the use of digital platforms and mobile payment systems to improve procurement efficiency. Training farmers on the benefits of these technologies and offering incentives for adoption could greatly enhance procurement practices.
- Government and NGOs should increase educational campaigns on sustainable sourcing and waste management practices. Financial incentives, such as subsidies for sustainable farming inputs, could also motivate farmers to adopt these practices more widely.
- Both the government and private sector should invest in rural infrastructure, such as roads and transport networks, to reduce logistical barriers that affect the timely delivery of agricultural inputs.

Future studies could focus on:

- Investigating the impact of digital transformation on procurement efficiency in agribusinesses would provide deeper insights into the potential of technological adoption to address procurement challenges.
- Examine the long-term effects of sustainability practices on agribusiness profitability and environmental impact. This could involve assessing the cost-benefit dynamics of adopting sustainable sourcing and waste management practices, particularly for smallholder farmers.

- Exploring the role of gender in access to procurement resources would be valuable. Understanding the unique challenges faced by women agribusiness owners in accessing financial support, technology, and stakeholder assistance could inform more inclusive policy interventions.
- The effectiveness of cooperative-led procurement models in enhancing economies of scale, reducing costs, and improving access to quality inputs. Such research would help determine the replicability of successful cooperative models across other regions.
- Examining the integration of climate resilience strategies into procurement practices would address the increasing importance of adapting agribusinesses to climate change. This area could explore how procurement strategies can mitigate risks posed by extreme weather events, such as droughts and floods, to ensure business continuity.

5. Acknowledgements

We extend our heartfelt gratitude to all who contributed to the successful completion of this research study. First, we wish to express our sincere appreciation to the management of Ruaha Catholic University (RUCU), specifically the Faculty of Business and Management Science, for their continuing support and encouragement throughout this research journey. Your guidance and provision of resources greatly facilitated the successful execution of this study. We are equally grateful to the management of the Tanzania Institute of Accountancy (TIA), Kigoma Campus, for their support and collaboration. Your valuable input and encouragement played a crucial role in shaping the direction and scope of this research.

We extend our deepest thanks to all respondents in Kilolo District who generously gave their time to participate in this study. Your insights, experiences, and willingness to share critical information were instrumental in achieving the objectives of this research.

Lastly, we would like to acknowledge our friends, whose constant encouragement and moral support provided the motivation needed to overcome challenges and remain focused on our goals. To all of you, we are deeply grateful. This work would not have been possible without your contributions, and we are honored to share its findings as a reflection of our collective efforts.

References

- [1] D. D. Weatherspoon and T. Reardon, "The rise of supermarkets in Africa: implications for agrifood systems and the rural poor," *Development policy review*, vol. 21, no. 3, pp. 333-355, 2003.
- [2] J. Sharma and A. Bhatt, "Role of Agri-Business Entrepreneurship, Innovation and Value Chains/Networks in Farmer Income Improvement: Models, Policies and Challenges," *Indian Journal of*

- Agricultural Economics*, vol. 77, no. 1, pp. 120-132, 2022.
- [3] O. Rushchitskaya, E. Kulikova, E. Kot, and T. Kruzhkova, "Sustainable practices and technological innovations transforming agribusiness dynamics," in *E3S Web of Conferences*, 2024, vol. 542: EDP Sciences, p. 03003.
- [4] F. Bienhaus and A. Haddud, "Procurement 4.0: factors influencing the digitisation of procurement and supply chains," *Business Process Management Journal*, vol. 24, no. 4, pp. 965-984, 2018.
- [5] M. Tukuta and F. Saruchera, "Challenges facing procurement professionals in developing economies: Unlocking value through professional international purchasing," *Journal of Transport and Supply Chain Management*, vol. 9, no. 1, pp. 1-9, 2015.
- [6] E. J. Woods, "Supply-chain management: Understanding the concept and its implications in developing countries," 2003.
- [7] O. Patience, "Critical Perspective on Agribusiness Supply Chain Management (ASCM) in Developing Nations: What are the Policy and Institutional Lessons for Developing Economies?," *American International Journal of Agricultural Studies*, vol. 1, no. 1, pp. 26-37, 2018.
- [8] J. M. Moyo, E. Bah, and A. Verdier-Chouchane, "Transforming Africa's agriculture to improve competitiveness," *The Africa competitiveness report*, vol. 2015, pp. 37-52, 2015.
- [9] K. Kauppi, A. Salmi, and W. You, "Sourcing from Africa: a systematic review and a research agenda," *International Journal of Management Reviews*, vol. 20, no. 2, pp. 627-650, 2018.
- [10] J. Potts, "Blockchain in agriculture," *Available at SSRN 3397786*, 2019.
- [11] H. S. Srivastava and L. C. Wood, "Cloud computing to improve agri-supply chains in developing countries," in *Encyclopedia of Information Science and Technology, Third Edition*: IGI Global, 2015, pp. 1059-1069.
- [12] K. Atuahene-Gima and J. Amuzu, "Farmcrowdy: digital business model innovation for farming in Nigeria," *Emerald emerging markets case studies*, vol. 9, no. 2, pp. 1-22, 2019.
- [13] N. G. Gavrilova, "Soldiers as farmers: army agriculture and food security in contemporary Nigeria," in *BIO Web of Conferences*, 2020, vol. 27: EDP Sciences, p. 00085.
- [14] C. Ayim, A. Kassahun, C. Addison, and B. Tekinerdogan, "Adoption of ICT innovations in the agriculture sector in Africa: a review of the literature," *Agriculture & Food Security*, vol. 11, no. 1, p. 22, 2022.
- [15] K. K. Arthur, R. K. Bannor, J. Masih, H. Oppong-Kyeremeh, and P. Appiahene, "Digital innovations: Implications for african agribusinesses," *Smart Agricultural Technology*, p. 100407, 2024.
- [16] A. Wineman, T. S. Jayne, E. Isinika Modamba, and H. Kray, "The changing face of agriculture in Tanzania: Indicators of transformation," *Development Policy Review*, vol. 38, no. 6, pp. 685-709, 2020.
- [17] M. M. Magesa, K. Michael, and J. Ko, "Access to agricultural market information by rural farmers in Tanzania," 2014.
- [18] R. Suleiman, "Local and regional variations in conditions for agriculture and food security in Tanzania," *AgriFoSe2030 report*, no. 10, 2018.
- [19] E. Eskola, "Agricultural marketing and supply chain management in Tanzania," 2005.
- [20] E. T. Lwoga, P. Ngulube, and C. Stilwell, "The management of indigenous knowledge with other knowledge systems for agricultural development: challenges and opportunities for developing countries," 2010.
- [21] M. Matto, "Mapping public procurement reforms in Tanzania: Compliance, challenges and prospects," *European Journal of Business and Management*, vol. 9, no. 12, pp. 175-182, 2017.
- [22] K. Msimangira and C. Tesha, "Global supply chain practices and problems facing developing countries: a Study in Tanzania," *Operations and Supply Chain Management: An International Journal*, vol. 7, no. 3, pp. 130-138, 2014.
- [23] R. M. Nkunda, I. Kazungu, and I. A. Changalima, "Collaborative procurement practices in public organizations: a review of forms, benefits and challenges," *Ghana Journal of Development Studies*, vol. 20, no. 1, 2023.
- [24] M. Kalubanga, "Sustainable procurement: concept, and practical implications for the procurement process," *International Journal of Economics and Management Sciences*, vol. 1, no. 7, pp. 1-7, 2012.
- [25] C. Schelle and B. Pokorny, "How inclusive is inclusive? A critical analysis of an agribusiness initiative in Kenya," *Sustainability*, vol. 13, no. 19, p. 10937, 2021.
- [26] M. Atosina Akuriba, M. Abunga Akudugu, A.-R. Alhassan, M. Atosina Akuriba, M. Abunga Akudugu, and A.-R. Alhassan, "Agribusiness Sustainability for Inclusive Growth," *Agribusiness for Economic Growth in Africa: Practical Models for Tackling Poverty*, pp. 89-110, 2021.
- [27] R. L. Chazdon, D. Lindenmayer, M. R. Guariguata, R. Crouzeilles, J. M. R. Benayas, and E. L. Chavero, "Fostering natural forest regeneration on former agricultural land through economic and policy interventions," *Environmental Research Letters*, vol. 15, no. 4, p. 043002, 2020.