

Research Article

Factors Influencing Coffee Cooperative Performance and Farmer Livelihoods in Kasese District, Uganda

Bright Kibabugha Necton^{*}, Edward Ssemakula, Nkuuhe Douglas

Department of Agriculture, Agribusiness, and Environment, Bishop Stuart University, Mbarara, Uganda

Abstract

The study focused on factors Influencing Coffee Cooperative Performance and Farmer Livelihoods in Kasese District, Uganda. The study is guided by one objective which was to; identify the key factors affecting the performance of primary coffee cooperatives. The study employed a cross-sectional research design and primary data was collected from 200 respondents. The data was analyzed using SPSS version 22.0. The study used questionnaires and interview guide to collect data. The study concludes that significant factors included; member's participation, Sig. = 0.004, Capacity building and technical support, Sig. = 0.04, Market linkage and price volatility, Sig. = 0.000, Effective governance and leadership, Sig. = 0.014, Poor quality coffee harvested, Sig. = 0.024 and non-significant factors included; Infrastructure deficits, Sig. = 0.140, lack of Knowledge on value addition technologies, B = 0.009, Sig. = 0.831, Inaccessibility to inputs, Sig. = 0.435 and Coffee pests and disease pressure, Sig. = 0.339. The study recommends enhancing access to inputs, credit, and extension services to improve the operational efficiency and sustainability of cooperatives. Local governments and coffee-related authorities should formulate policies that directly support cooperative development. There is a need to stabilize market access and coffee prices. Establish long-term contracts with buyers to minimize price fluctuations. There is a need to promote certification schemes like organic, fairtrade to encourage coffee quality.

Keywords

Coffee Cooperatives, Performance, Farmer's livelihood

1. Introduction

Coffee is a vital global commodity, with millions of smallholder farmers worldwide relying on its cultivation for their livelihoods [4]. However, sustainability challenges such as climate change and volatile market prices threaten the long-term viability of coffee production [20]. Coffee cooperatives play a crucial role in supporting smallholder farmers, providing access to resources and market opportunities [12]. Enhancing the livelihoods of coffee farmers is essential for the sustainable development of the coffee industry and the

well-being of farming communities worldwide [20].

At the continental level, Africa is a significant player in the global coffee industry, with several countries being major producers and exporters of coffee beans. Coffee farming contributes significantly to the economies of many African nations, providing employment and income for millions of people [18]. However, African coffee farmers often face challenges such as low productivity, limited access to markets, and vulnerability to climate change impacts [4]. Efforts to

^{*}Corresponding author: brightknecton@gmail.com (Bright Kibabugha Necton)

Received: 16 August 2025; **Accepted:** 8 September 2025; **Published:** 26 September 2025



Copyright: © The Author(s), 2025. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

enhance the sustainability of coffee production in Africa are crucial for the continent's economic development and the well-being of farming communities.

In Sub-Saharan Africa, coffee plays a vital socio-economic role as a key cash crop, contributing significantly to foreign exchange earnings, rural employment, and household income [8]. Despite its potential, coffee farming in Sub-Saharan Africa faces persistent challenges including, low productivity, weak bargaining power, and inadequate access to inputs and markets. As a response, coffee cooperatives have emerged as crucial institutions for improving farmer livelihoods by facilitating access to markets, improving price negotiation, enhancing financial services, and providing agricultural extension services [17]. However, the performance of these cooperatives is often constrained by poor governance, limited capital, lack of technical capacity, and weak institutional frameworks [13]. Therefore, examining the key factors influencing the performance of primary coffee cooperatives is central to enhancing their capacity to uplift farmer livelihoods.

In East Africa, including countries like Uganda, Kenya, Tanzania, Burundi and Rwanda is renowned for its high-quality coffee beans and is a major coffee-producing region [3]. In this region, coffee farming is a significant source of income for millions of smallholder farmers, contributing to poverty alleviation and rural development [16]. However, farmers in East Africa face various challenges, including fluctuating market prices and inadequate access to resources [18]. Sustainable development initiatives targeting coffee farming communities in East Africa are essential for improving livelihoods and ensuring the long-term viability of the coffee industry.

In Uganda, coffee is a vital cash crop and a major export commodity, contributing significantly to the country's economy [11]. According to the UCDA report, Ugandan coffee exports have expanded significantly, reaching 6.13 million bags in the 2023/2024 financial year. This represents a 6.33% increase in quantity and a substantial 35.29% increase in value compared to the previous year [11]. This has been achieved through various policies and programs implemented by the Ugandan government to support coffee farmers and enhance the competitiveness of the coffee sector. However, challenges such as low productivity and poor infrastructure that hinder the sustainable development of the coffee industry in Uganda, ultimately hindering the enhancement of farmers' livelihoods [2].

Kasese District, located in western Uganda, is a significant coffee-producing region with a large number of smallholder farmers [5]. As per the Kasese District Local Government Production report, a staggering 85% of farmers in the region are immersed in coffee cultivation, with 80% dedicated to Arabica coffee and the remaining 20% to Robusta coffee [5]. Annually, approximately 250,000 tons of coffee, equivalent to 417,000 60kg bags, are harvested from this district alone. Notably, in the financial year 2017/2018, Kasese's coffee

exports accounted for 9.2% of the Uganda's coffee export volume [11]. Coffee farming plays a crucial role in the local economy, providing income and employment opportunities for thousands of households in the district.

Despite its success, coffee farmers in Kasese District face various challenges, including low incomes, limited access to markets, and erratic rainfall patterns and pest infestations [21]. These challenges are further compounded by the under-performance of coffee cooperatives in the district, which struggle to provide the necessary support and resources to their members. As a result, many smallholder farmers remain unable to significantly improve their livelihoods despite the potential benefits of cooperative membership. Addressing the factors contributing to this underperformance is crucial for the sustainability of the coffee industry and the economic well-being of farmers in Kasese District.

2. Problem Statement

In Kasese District, Uganda, where 85% of farmers cultivate coffee, coffee cooperatives are seen as a powerful engine for rural development. These collectives hold the potential to empower the district's smallholder coffee farmers by creating better access to markets, fostering collaboration and decision-making, and promoting sustainable coffee growing practices [12].

Despite the potential benefits of coffee cooperatives, their effectiveness in improving smallholder farmers' livelihoods is often hindered by significant challenges. Many cooperatives in the District struggle with limited access to financing, governance issues, gender disparities, and resistance to adopting innovative farming practices. These interconnected challenges often result in cooperatives' inability to provide adequate support to their members, leading to low incomes, limited access to resources and reduced bargaining power for farmers within the coffee supply chain [1].

Existing research, although valuable, has often focused on individual aspects of these challenges, neglecting the important interplay between economic, social, environmental, and leadership factors that determine cooperatives' success in contributing to farmer livelihoods. There is a critical gap in understanding how these factors collectively influence cooperative performance and sustainability, thus hindering the well-being of smallholder coffee farmers in Kasese District. Additionally, limited research has been conducted specifically on primary coffee cooperatives in this region, and practical application of best practices remains limited.

The consequences of inaction may continue affecting the status of coffee cooperatives thus continuous negative impact on farmer livelihoods. Persistent neglect of these challenges not only hinders the progress of coffee cooperatives in Kasese but also perpetuates the cycle of poverty among smallholder coffee farmers, impeding overall rural development.

This study aimed to address this critical gap by adopting a comprehensive and context-specific approach. It delved into

understanding the interconnected factors contributing to the under-performance of coffee cooperatives, thus hindering farmers' livelihood improvement in Kasese District. By examining the inter-connectedness of all the factors, this research seeks to uncover the underlying reasons for cooperative success or failure in enhancing smallholder farmers' livelihoods sustainably. Through actionable insights, this study intended to inform the development of effective strategies that can revitalize coffee cooperatives and empower them to become true drivers of rural development in Kasese District.

3. Research Objectives

The main objective of the study was; to investigate the factors influencing coffee cooperative performance and farmer livelihoods in Kasese District. The specific objective; to identify the key factors affecting the performance of primary coffee cooperatives in Kasese District.

4. Significance of Study

The significance of this study is deeply rooted in its potential to benefit various stakeholders, including coffee farmers, government policymakers, local communities, coffee cooperatives, and future researchers, all within the context of understanding the underperformance of primary coffee cooperatives in Kasese District and its impact on farmer livelihoods.

To coffee farmers

The study will be important in uncovering the key factors hindering the performance of their primary coffee cooperatives. By shedding light on these challenges, the study will empower farmers with knowledge that can help them advocate for better cooperative management and support systems.

To government policymakers

The policy makers will benefit from the study's insights into the specific challenges and opportunities faced by primary coffee cooperatives in Kasese District. These insights

will be critical in informing policies and strategies aimed at strengthening cooperative governance, improving market access, and supporting infrastructure development.

To local communities

The study findings will highlight the role of primary coffee cooperatives in fostering community cohesion and collective action. By addressing the factors contributing to the underperformance of these cooperatives, the study will help to enhance the social and economic resilience of local communities.

To coffee cooperatives

The study will provide a comprehensive analysis of the challenges that cooperatives face and offer practical strategies for overcoming these obstacles. By understanding the factors that impede their performance, cooperatives can implement more effective management practices, tailor their services to meet the needs of their members, and improve their overall sustainability.

To future researchers

The study results will fill a critical gap in the existing literature on primary coffee cooperatives and farmer livelihoods in Kasese District. The study's findings will provide a solid foundation for further research into cooperative management, rural development, and sustainable agriculture. Additionally, by identifying the complex interplay of factors affecting cooperative performance, this research will guide future studies in exploring new ways for improving the livelihoods of smallholder farmers in similar contexts.

5. Conceptual Framework

The conceptual framework is a systems model which illustrates the relationship between study variables. It is based on a three factor model shown in the diagram below: consisting of a) as Factors contributing to the under-performance of Primary Coffee Cooperatives as the independent variable; b) improvement in farmer Livelihoods as dependent variable and c) the mediating variables.

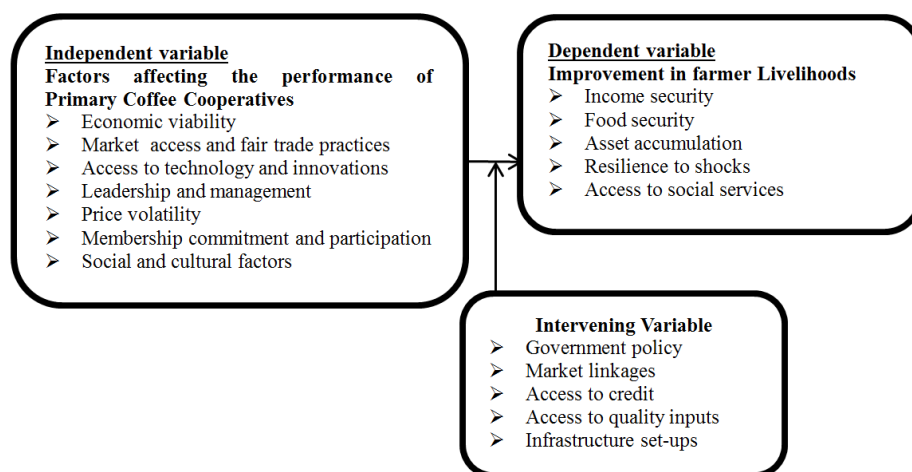


Figure 1. Conceptual framework showing the relationship between independent, intervening, and dependent variables in primary coffee cooperative performance and farmer livelihoods.

Mediating variables strengthen, weaken, or condition the effect of cooperative performance factors on farmers' livelihoods. For example, even if cooperatives perform well in leadership and management, farmers may not enjoy income security unless there is good market linkage and supportive government policy. Access to credit may amplify the benefits of improved cooperative performance by enabling farmers to invest in inputs, thereby improving food security and asset accumulation. Conversely, weak infrastructure may reduce the positive impact of cooperatives on income security or resilience to shocks.

6. Materials and Methods

This study focused on five coffee-growing sub-counties in Kasese District, Uganda, known for their significant number of primary coffee cooperatives. The selected sub-counties are Mahango, Kahokya, Kilembe, Bugoye, and Bwesumbu. Kasese District is situated in the Rwenzori region, with coordinates 0.0646 °N and 30.0665 °E. This selection ensures a comprehensive analysis of cooperatives within key coffee-producing areas of the district. Kasese district was chosen because it hosts numerous primary coffee cooperatives actively engaged in coffee marketing, processing, and value addition. These cooperatives play a key role in organizing smallholder farmers, improving bargaining power, providing access to extension services, and enhancing income through collective marketing. Studying these cooperatives provides insights into their effectiveness and impact.

This study utilized a cross-sectional survey design, allowing for the collection of data at a single point in time to assess the current status of coffee cooperatives and smallholder coffee farmers in the region. A *cross-sectional research design* was appropriate for this study because it made it possible to analyze the relationships between multiple factors such as management practices, access to markets, farmer participation, and cooperative services and their influence on both cooperative performance and farmer livelihoods. It is cost-effective, time-efficient, and suitable for identifying patterns, associations, and variations among different groups of farmers, thereby providing a snapshot of the current situation that can inform policy and intervention strategies.

The study targeted two primary groups: coffee cooperative officials and smallholder coffee farmers (members of the primary cooperatives) operating within the Kasese District. Members were sampled from each cooperative selected in the coffee-growing sub-counties mentioned in the area of study.

The sample size was calculated using Slovin's formula [19]:

$$n = N/(1+N (e)^2)$$

Where;

- 1) *n* is the required sample size,
- 2) *N* is the population size, and

3) *e* is the marginal error.

Given the estimated population of 400 individuals (80 members per cooperative on average, across 5 cooperatives), including coffee cooperative officials and smallholder coffee farmers from Five selected cooperatives in the 5 selected coffee-growing sub-counties within Kasese District, and setting a margin of error at 0.05, the calculation is as follows:

Population size (*N*) = 5 coffee cooperatives * 80 average members per cooperative = 400 members = $400/(1+400(0.05)^2)$

n = 200 respondents

Therefore, the required sample size is 200 respondents. This sample was drawn from the coffee-growing sub-counties within Kasese District, selecting at least one cooperative per sub-county. This approach aimed to ensure that the research findings accurately represent the district's coffee cooperative landscape.

The study employed a combination of sampling techniques to ensure a representative and comprehensive sample. Stratified sampling was utilized to ensure that different strata are represented, specifically focusing on the coffee-growing sub-counties with a significant number of primary coffee cooperatives in Kasese District. This approach ensured that each sub-county is adequately represented in the sample. In addition, random sampling was employed in two stages. First, at least one cooperative was randomly selected from each coffee-growing sub-county. Secondly, farmers within each selected cooperative were randomly chosen. This process helped to capture a diverse range of perspectives and experiences from different cooperatives and their members.

Purposive sampling was used to select key informants who possessed expertise relevant to the research objectives, such as cooperative officials. This method ensured that insights from individuals with specialized knowledge are included in the study. Overall, this multi-faceted approach was designed to provide a balanced and thorough understanding of the coffee cooperative landscape in Kasese District.

Table 1. Sample population.

Category	Estimated population	Sample size	Sampling method
Smallholder coffee farmers	390	190	Simple random sampling
Cooperative officials	05	05	Purposive sampling
Local leaders	05	05	Purposive sampling
Total	537	200	

Questionnaires were designed to gather both quantitative and qualitative data from smallholder coffee farmers. They

included closed-ended questions for numerical data and open-ended questions for detailed, descriptive responses related to their livelihoods and cooperative experiences.

Key informant interview guides were used to obtain further qualitative and quantitative data from coffee cooperative officials and other relevant stakeholders. These interviews provided deeper insights into the management, challenges, and impact of coffee cooperatives.

All data collection instruments were uploaded to the Kobo Collect App. This application facilitated efficient and accurate data collection by providing access to the questionnaires and interview guides through smartphones, and enabled real-time transmission of data to a central server, ensuring standardized data collection across various respondents and locations.

The ethical approval for the study was obtained from Bishop Stuart University Research and Ethics Committee. Ethical clearance reference number was given as BSU-REC-2025-505.

Informed consent: Participants were fully informed about the nature, purpose, and potential risks and benefits of the research before they agreed to take part. This included detailed information, voluntary participation, and the ability to withdraw at any time without penalty.

Confidentiality and anonymity; Researcher protected participants' data and personal information from unauthorized access and disclosure. Ensuring that participants' identities were not linked to their data in any public report.

Minimizing harm: Researcher strived to minimize any potential physical, psychological, or social harm to participants through identifying and mitigating potential risks associated with the research.

Respect for respondents: Respecting the autonomy and dignity of all participants, including special considerations for vulnerable populations (for example, children, prisoners, individuals with cognitive impairments).

Conflict of interest: Researcher disclosed any potential conflicts of interest that could affect the research process or findings through managing and mitigating conflicts to maintain objectivity and trustworthiness.

The research data had undergone a thorough process of coding and cleaning using advanced Excel techniques to prepare it for analysis. Subsequently, data analysis was performed using SPSS, applying both descriptive and inferential statistical methods. This approach allowed for a comprehensive examination of the data, providing detailed insights into the dynamics of coffee cooperatives and smallholder coffee farming. By adhering to these methodological procedures, the study aimed to produce robust and accurate data that effectively captured the complexities of coffee cooperatives and their impact on smallholder farming in the Rwenzori region, specifically within Kasese District.

Qualitative data was collected through key informant interviews with cooperative officials/ leaders, and local leaders. Transcribe recorded interviews in form of verbatim. Trans-

lated transcripts into English where necessary, ensuring that meaning was retained. Organized field notes and documents into analyzable formats. Developed an initial codebook based on the study objectives. Applied open coding to identify emerging issues from participants. Thematic analysis was done through organizing codes into broader themes and sub-themes and compare themes across different respondent categories for better analysis.

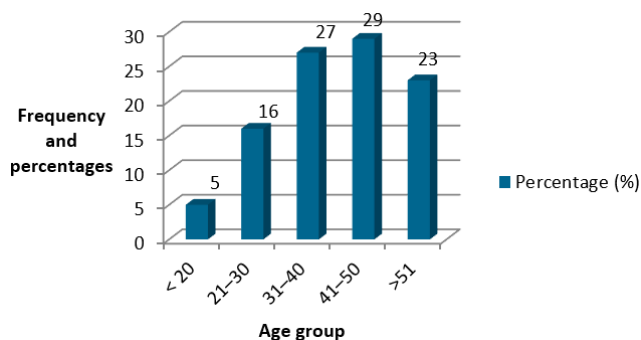


Figure 2. Age group.

As show in figure 2, youth under 30 make up only 21% of the cooperative. The largest proportion (29%) of members are aged 41-50, followed by those aged 31-40 (27%) and over 51 (23%). The age profile suggests that the cooperative is largely composed of middle-aged and older adults, which bring valuable experience and stability.

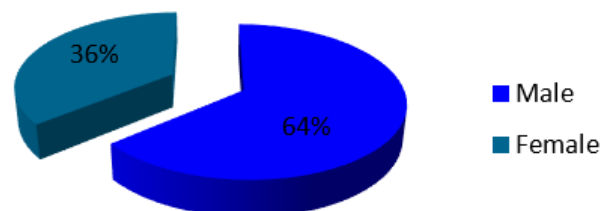


Figure 3. Showing Gender.

As shown in figure 3, males dominate (64%), while females account for only (36%). An implication that there gender-based constraints particularly land ownership rights, time burdens) limiting women's participation. Gender-sensitive policies and targeted interventions are essential for equality and cooperative effectiveness.

As shown in figure 4, most respondents have at least primary or secondary education (69% combined), with a significant minority (14%) having no formal education and others 01%. The results imply that educational profile is favorable for training adoption and cooperative literacy, but materials should still cater to those with limited education through visual aids and oral sessions.

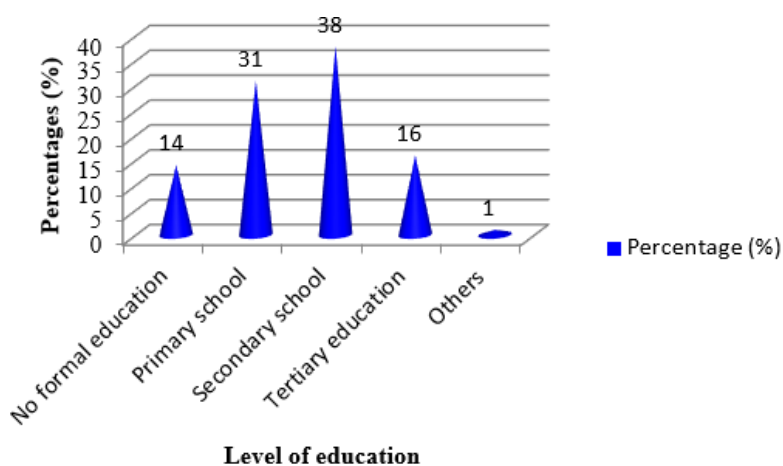


Figure 4. Level of education.

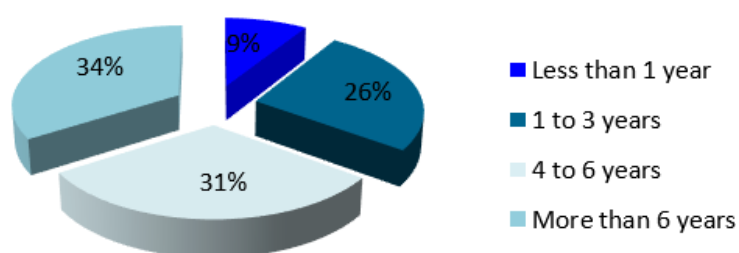


Figure 5. Showing membership duration.

The results in figure 5, shows less than 1 year 9.0%, 1 to 3 years shows 26.0%, 4 to 6 years, 31%, More than 6 years, 34%. The majority of cooperative members 65% have stayed

for more than 4 years, reflecting *deep rooted trust and coffee primary cooperative sustainability*.

Table 2. Regression output on key factors hindering the performance of primary coffee cooperatives.

Response category	B	Sig.	Exp. (B)	95% Confidence Interval for Exp (B)	
				Lower Bound	Upper Bound
Intercept	1.186	.383			
In accessibility to inputs	-.013	.435	.987	.955	1.020
Lack of knowledge on value addition technologies	.009	.831	1.009	.932	1.091
Members participation	.352	.004*	1.422	1.118	3.807
Capacity building and technical support	1.061	.041*	1.541	.805	4.099
Infrastructure deficits	.378	.140	1.459	.883	2.412
Market linkage and price volatility	3.107	.000*	2.898	.687	4.174
Effective governance and leadership	1.072	.014*	1.342	.145	2.808
Poor quality coffee harvested	1.033	.024*	2.808	1.319	5.978
Coffee pests and disease pressure	-.714	.339	.489	.113	2.116

* Significant at $p < 0.05$.

Intercept $B = 1.186$, $Sig. = 0.383$. The intercept is not statistically significant. It represents the baseline log odds of performance when all predictors are zero.

Inaccessibility to inputs, $B = -0.013$, $Sig. = 0.435$, $Exp(B) = 0.987$. A 1.3% decrease in odds of better performance per unit increase in inaccessibility. This factor is *not statistically significant*, meaning inaccessibility to inputs (like fertilizers or seedlings) does not have a reliably measurable effect on cooperative performance in this model. This implies that although inputs are essential for production, their accessibility may not strongly determine how well the cooperative performs perhaps due to alternative sources or government interventions.

Lack of Knowledge on value addition technologies, $B = 0.009$, $Sig. = 0.831$, $Exp(B) = 1.009$. This shows that very small 0.9% increase in odds of better performance. This is not a significant predictor. While the odds ratio is above 1, the wide confidence interval and high p-value mean we cannot be confident in this effect. An implication that Cooperatives may not yet rely heavily on value addition technologies, or awareness and usage are still too low to affect overall performance.

Member's participation, $B = 0.352$, $Sig. = 0.004$, $Exp(B) = 1.422$. *the results indicate* a 42.2% increase in odds of better performance with each increase in participation level. This is a *statistically significant* factor. As member participation increases, the cooperative's performance improves. This implies that cooperatives thrive when members are engaged in meetings, decision-making, and activities. Participation boosts transparency, ownership, and efficiency.

Capacity building and technical support, $B = 1.061$, $Sig. = 0.041$, $Exp(B) = 1.541$. This shows statistically significant and positive relationship: as capacity building increases, cooperative performance increases.

Infrastructure deficits, $B = 0.378$, $Sig. = 0.140$, $Exp(B) = 1.459$. *The results show* a 45.9% increase in performance odds if infrastructure improves. Although the effect seems positive, the p-value shows this is *not statistically significant*. While infrastructure like roads and storage may affect performance, it may not be the strongest factor. Possibly, members adapt with informal systems or local markets.

Market linkage and price volatility, $B = 3.107$, $Sig. = 0.000$, $Exp(B) = 2.898$. *This nearly 3 times higher odds* of good performance when market access improves and price instability is reduced. This is a *strong and significant predictor* of cooperative performance. Market factors are central to success. This implies that cooperatives must establish strong, stable market linkages and reduce exposure to volatile pricing to improve incomes and member confidence.

Effective governance and leadership. $B = 1.072$, $Sig. = 0.014$, $Exp(B) = 1.342$. *The 34.2% higher odds* of improved performance with good governance. This is a significant factor. Good leadership leads to better resource management, transparency, and trust among members. This implies strong governance is essential training for leaders, clear bylaws, and accountability mechanisms are necessary to enhance cooperative outcomes.

Poor quality coffee harvested, $B = 1.033$, $Sig. = 0.024$, $Exp(B) = 2.808$. This is more than *double the odds* of poor performance when coffee quality is low. A significant and strong factor. Poor-quality coffee harms performance through lower prices, loss of markets and bad reputation.

Coffee pests and disease pressure, $B = -0.714$, $Sig. = 0.339$, $Exp(B) = 0.489$. The odds of performance decrease, but this is *not statistically reliable*. Although pests and diseases are a threat, this result is *not statistically significant*.

7. Discussion of Findings

The results show market linkage and price stability hindered performance of primary coffee cooperatives. This was the most significant predictor in the model. The results imply that cooperatives must establish strong, stable market linkages and reduce exposure to volatile pricing to improve incomes and member confidence. This was noted that reliable market access and price predictability help cooperatives stabilize income, reduce vulnerability, and improve service provision. Price volatility, on the other hand, often discourages production and cooperative loyalty among farmers. This finding aligns with Kiyimba and Ainebyona who reported that many cooperatives struggle with market access due to limited connections to export markets, fluctuating global coffee prices, and dependency on middlemen [10]. Kiyimba and Ainebyona reported that, farmers frequently sell their coffee individually at lower farm-gate prices. Although some cooperatives have attempted to engage in certification schemes such as Rainforest Alliance, the cost and complexity of compliance remain major hurdles [10].

The study respondents also revealed infrastructure deficits, although positive, this result was not statistically significant. This could be due to infrastructure not being a direct determinant in the short term. However, access to roads, storage, and electricity plays a foundational role in long-term cooperative success. This finding is supported by FAO which revealed that poor rural road networks make it difficult to transport cherries to processing centers, especially during the rainy season and that most cooperatives lack proper storage and drying facilities, which leads to post-harvest losses and reduced coffee quality [6].

The results indicated a positive and significant impact, meaning that cooperatives that receive regular training and technical assistance are 54.1% more likely to perform better. Training enhances managerial and entrepreneurial skills among cooperative leaders and members, thereby improving productivity and business outcomes. Technical support helps farmers adopt better agronomic practices and post-harvest handling, which directly impacts the quantity and quality of coffee marketed. This finding agrees with Kakooza who in his study found out that extension services are still inadequate and poorly funded. Many cooperative leaders and members lack basic training in business planning, quality

control, or record-keeping [9].

The results also show that good leadership and governance positively and significantly affect cooperative performance, increasing odds by 34.2%. Good leadership leads to better resource management, transparency, and trust among members. This implies that strong governance is essential training for leaders, clear bylaws, and accountability mechanisms are necessary to enhance cooperative outcomes. Leadership quality determines strategic direction, transparency, and accountability in cooperatives. Poor governance leads to mismanagement and reduced trust, which in turn affects participation and investment by members. This finding also agrees with NPA, whose report emphasized that mismanagement and lack of transparency have led to the collapse or dormancy of several primary coffee cooperatives in western Uganda. This undermines member trust and weakens collective bargaining, which in turn reduces members' loyalty and commitment [15].

The results show that member participation has a statistically significant positive effect on cooperative performance. The odds ratio of 1.422 suggests that cooperatives with active member participation are 42.2% more likely to perform better than those with poor participation. This implies that cooperatives thrive when members are engaged in meetings, decision-making, and activities. Participation boosts transparency, ownership, and efficiency. This aligns with findings by Francesconi and Ruben, who emphasized that high member engagement leads to stronger governance and sustainability in cooperatives [7]. Member participation often translates to increased trust, ownership, and responsiveness to challenges, which strengthens cooperative institutions and their service delivery.

Though statistically insignificant, the negative coefficient indicates that increased pest and disease pressure is likely to hinder cooperative performance. This is supported by Musoni, who documented how disease outbreaks like coffee wilt reduce productivity and quality, thereby affecting cooperative sales and income [14].

8. Study Conclusion

The study concludes that the most critical factors hindering the performance of primary coffee cooperatives include poor member participation, lack of capacity building, weak governance, poor market linkages, and low-quality coffee harvesting. These factors were statistically significant and positively related to cooperative performance. In contrast, inaccessibility to inputs, lack of value addition knowledge, infrastructure issues, and pest pressure showed no statistically significant effects in this model.

9. Study Recommendations

Implement capacity building programs that focus on business planning, quality control, and governance may help

increase cooperative effectiveness.

There is a need to enhance access to inputs, credit, and extension services to support cooperatives' operational efficiency and sustainability.

Local governments and coffee-related authorities should formulate policies that directly support cooperative development.

There is a need to equip cooperatives with basic value addition technologies like, processing, roasting, pulpers and drying racks.

There is a need to stabilize market access and coffee prices. Establish long-term contracts with buyers to minimize price fluctuations.

There is a need to promote certification schemes like organic, fairtrade to encourage coffee quality.

Abbreviations

FAO	Food Agriculture Organisation
ICO	International Coffee Organisation
NPA	National Planning Authority

Acknowledgments

The successful completion of this project owes much from several individuals who contributed much in one way or another. My earnest gratitude goes to greater Kasese district authorities for allowing the researcher to carry out study in their area of jurisdiction. I would like to pull my earnest gratitude to my research supervisors; Prof. Edward SSe-makula and Mr. Nkuuhe Douglas for having spared their enough time for me right away from the seminal phase of this research to the end, your work will always never be under-estimated.

Conflicts of Interest

All authors declare no conflicts of interest.

References

- [1] Balgah, R. A. (2018). Factors Influencing Coffee Farmers' Decisions to Join Cooperatives. *Sustainable Agriculture Research*, 8(1), 42. <https://doi.org/10.5539/sar.v8n1p42>
- [2] Bamwesigye, D., Doli, A., Adamu, K. J., & Mansaray, S. K. (2020). A review of the political economy of agriculture in Uganda: Women, property rights, and other challenges. *Universal Journal of Agricultural Research*, 8(1), 1-10. <https://doi.org/10.13189/ujar.2020.080101>
- [3] Bera, A. (2021). Impact of Climate Change on Pulse Production and it's Mitigation Strategies. *Asian Journal of Advances in Agricultural Research*, April 2021, 14-28. <https://doi.org/10.9734/ajaar/2021/v15i230147>

- [4] Borrella, I., Mataix, C., & Carrasco-Gallego, R. (2015). Smallholder Farmers in the Speciality Coffee Industry: Opportunities, Constraints and the Businesses that are Making it Possible. *IDS Bulletin*, 46(3), 29-44.
<https://doi.org/10.1111/1759-5436.12142>
- [5] Coroneri, M., & Robin, N. B. (2021). The relationship coffee cultivation and food security in farmers' households in Kasese district western Uganda.
- [6] FAO. (2022). Enabling Access to Credit for Smallholder Coffee Farmers in East Africa. Rome: FAO Publications.
- [7] Francesconi, G. N., & Ruben, R. (2012). The hidden impact of cooperative membership on quality management: Evidence from Ethiopia. *Journal of Development Studies*, 48(11), 1628-1644.
- [8] International Coffee Organization (ICO), (2024). World Coffee Outlook 2024. Retrieved from <https://www.ico.org>
- [9] Kakooza, A. (2024). Challenges facing cooperative societies in western Uganda: A case study of Kasese District. *Uganda Management Review*.
- [10] Kiyimba, D. & Ainebyona, P. (2023). Market access constraints among primary coffee cooperatives in Rwenzori region. *Makerere Business Review*.
- [11] MAAIF. (2022). National Coffee Policy of Uganda. Kampala: Ministry of Agriculture, Animal Industry and Fisheries.
- [12] Mojo, d., fischer, C., & Degefa, T. (2017). The determinants and economic impacts of membership in coffee farmer cooperatives: recent evidence from rural Ethiopia. *Journal of Rural Studies*, 50, 84-94.
<https://doi.org/10.1016/j.jrurstud.2016.12.010>
- [13] Munyua, J. K. (2023). Performance of Agricultural Cooperatives in Sub Saharan Africa: Trends and Constraints. *African Journal of Cooperative Development*, 11(2), 85-99.
- [14] Musoni, A., (2015). Coffee pests and diseases and their management in Africa. *African Crop Science Journal*, 23(4), 457-465.
- [15] National Planning Authority (NPA). (2024). Draft Concept Note for the Fourth National Development Plan (NDP IV). Kampala: Government of Uganda.
- [16] Ndwiga, G. M. and J. (2015b). This document is discoverable and free to researchers across the globe due to the work of AgEcon Search. Help ensure our sustainability. AgEcon Search, 18. <https://doi.org/10.19268/JGAFS.512020.1>
- [17] Ochieng, R. A. (2022). Enhancing the Sustainability of Coffee Cooperatives in East Africa. *Journal of Agrarian Studies*, 15(3), 112-127.
- [18] Otieno, H. M. O., Alwenge, B. A., & Okumu, O. O. (2019). Coffee Production Challenges and Opportunities in Tanzania: The Case Study of Coffee Farmers in Iwindi, Msia and Lwati Villages in Mbeya Region. *Asian Journal of Agricultural and Horticultural Research*, 3(2), 1-14.
<https://doi.org/10.9734/ajahr/2019/v3i229993>
- [19] Slovin, E. (1965). Formula for sample size calculation. Unpublished manuscript.
- [20] Velmourougane, K., & Bhat, R. (2017). Sustainability Challenges in the Coffee Plantation Sector. *Sustainability Challenges in the Agrofood Sector*, February 2017, 616-642.
<https://doi.org/10.1002/9781119072737.ch26>
- [21] Wang, N., Jassogne, L., van Asten, P. J. A., Mukasa, D., Wanyama, I., Kagezi, G., & Giller, K. E. (2015). Evaluating coffee yield gaps and important biotic, abiotic, and management factors limiting coffee production in Uganda. *European Journal of Agronomy*, 63, 1-11.
<https://doi.org/10.1016/j.eja.2014.11.003>