

Agro-Industrial Parks and Regional Integration: Opportunities for Inclusive Rural Development, The Ugandan Case

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Abstract

This study investigates the role of agro-industrial parks (AIPs) in fostering inclusive rural development within the context of regional integration, focusing on the Ugandan case. As Uganda positions itself as a key player in the East African Community (EAC), agro-industrial parks are increasingly viewed as strategic instruments for accelerating rural transformation, reducing poverty, and promoting cross-border economic cooperation. The study was guided by two main objectives: To assess the contribution of agro-industrial parks to rural income generation and employment creation and to examine the extent to which agro-industrial parks enhance regional integration through cross-border trade and collaboration in the EAC. A descriptive research design was adopted, utilizing both qualitative and quantitative methods. A purposive sampling technique was used to select 30 respondents, including farmers, agro-processors, local government officials, and park administrators from the Nwoya and Soroti agro-industrial parks. Data were collected through structured interviews, questionnaires, and focus group discussions. The findings revealed that agro-industrial parks significantly contribute to rural development by increasing household incomes, promoting agro-processing, and creating employment opportunities for youth and women. However, challenges such as limited infrastructure, inadequate access to credit, and low levels of value addition persist. The study also found that AIPs facilitate regional integration by enabling cross-border trade of processed goods, strengthening value chain linkages across EAC borders, and attracting regional investors. The study concludes that agro-industrial parks hold great potential to drive inclusive rural development in Uganda if effectively supported.

Key Words: Industrial Park, Regional, Development, Uganda

Introduction

Agriculture remains the foundation of Uganda's economy, employing the majority of the labor force, supplying food needs, and serving as the country's main source of foreign exchange (Uganda Bureau of Statistics (UBOS), 2024; Government of Uganda, 2020). Despite favorable agro-climatic conditions, the sector has long been constrained by low productivity, weak post-harvest handling, limited value addition, and fragmented value chains (Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), 2021; Food and Agriculture Organization (FAO), 2022).

In response, the Government of Uganda has positioned agro-industrialization as a central pillar of structural transformation, with agro-industrial parks (AIPs) promoted as hubs for processing, logistics, and agribusiness investment that link smallholder producers to regional and domestic markets (Government of Uganda, 2020; Uganda Investment Authority (UIA), 2023). AIPs are intended to reduce transaction costs, stimulate local enterprise, enhance smallholder incomes through reliable offtake, and create off-farm jobs, thereby contributing to inclusive rural development (Global Food Security Strategy (GFSS), 2022; World Bank, 2021). Policy frameworks such as NDPIII, the Agro-Industrialisation Programme Implementation Action Plan (PIAP), and Vision 2040 underscore the role of AIPs in shifting Uganda from subsistence farming to an agro-industrial economy (Government of Uganda, 2013; National Planning Authority (NPA), 2020).

Literature Review

Agro-industrial parks (AIPs) are increasingly recognized as strategic instruments for agricultural modernization and structural transformation, particularly in sub-Saharan Africa. By clustering agro-processing industries, logistics infrastructure, and business support services near production zones, AIPs are designed to reduce transaction costs, enhance value addition, and stimulate rural industrialization (World Bank, 2021). Similar models have been implemented globally. For instance, Ethiopia's Integrated Agro-Industrial Parks (IAIPs) have demonstrated the potential to link smallholder farmers with processing industries and export markets (United Nations Industrial Development Organization (UNIDO), 2020). Likewise, China's agro-industrial clusters have played a central role in transforming rural economies through value chain integration and rural industrialization (Zhang & Donaldson, 2010).

Empirical studies suggest that AIPs can significantly improve rural livelihoods by increasing market access, stabilizing agricultural prices, and creating employment opportunities. In Rwanda, agro-processing zones have enhanced farmer incomes through improved aggregation and access to regional markets (Food and Agriculture Organization (FAO), 2022). Similarly, in Brazil, agro-industrial hubs have supported smallholder commercialization and export competitiveness (Wilkinson & Rocha, 2009). In Asia, India's Mega Food Parks Scheme has contributed to reducing post-harvest losses and promoting agro-based employment (Ministry of Food Processing Industries, 2021). These findings align with broader development frameworks such as the U.S. Global Food Security Strategy (GFSS), which emphasizes agro-industrialization as a pathway to inclusive growth (GFSS, 2022).

However, the effectiveness of AIPs is highly contingent upon governance structures, inclusivity, and institutional coordination. While some studies highlight positive outcomes, others caution that benefits are unevenly distributed. For example, research in Ethiopia

indicates that despite infrastructure investments, limited smallholder integration and weak institutional coordination have constrained the inclusiveness of agro-industrial parks (UNIDO, 2020). Similarly, in Tanzania, agro-industrial initiatives have faced challenges related to land acquisition conflicts and inadequate stakeholder participation (Sulle, 2017). In Uganda, organizations such as the Civil Society Budget Advocacy Group (CSBAG, 2022) and Oxfam Uganda (2023) have raised concerns that without deliberate policies, AIPs may disproportionately benefit large-scale investors while marginalizing smallholder farmers.

However, some scholars argue that when properly designed, AIPs can enhance inclusivity through mechanisms such as contract farming, farmer cooperatives, and access to finance. Evidence from Thailand's agro-processing clusters shows that integrating smallholders into structured value chains can significantly improve productivity and incomes (Asian Development Bank, 2018). Similarly, Kenya's horticulture sector demonstrates how coordinated value chains and export-oriented agro-processing can empower small-scale producers (Dolan & Humphrey, 2000). These contrasting findings suggest that the success of AIPs depends largely on policy design, institutional capacity, and the extent of stakeholder participation.

At the regional level, economic integration frameworks such as the East African Community (EAC) provide opportunities for scaling agro-industrialization. The EAC offers expanded markets, harmonized trade policies, and cross-border infrastructure that can enhance the competitiveness of agro-industrial parks (EAC Secretariat, 2023). Comparable regional initiatives elsewhere reinforce this potential. For example, the European Union's Common Agricultural Policy has facilitated cross-border agricultural trade and agro-processing integration (European Commission, 2020), while the Association of Southeast Asian Nations (ASEAN) has promoted

regional agro-value chains through trade liberalization (ASEAN Secretariat, 2021). Nonetheless, significant challenges persist in realizing the full potential of regional integration. Non-tariff barriers, inconsistent standards, and infrastructure deficits continue to constrain intra-regional trade within the EAC (EAC Secretariat, 2023). Similar issues have been observed in West Africa, where regional trade agreements under ECOWAS are often undermined by policy inconsistencies and weak enforcement (UNECA, 2019). These constraints highlight the importance of policy harmonization, infrastructure investment, and institutional coordination in ensuring that agro-industrial parks effectively contribute to both rural development and regional integration.

Methodology

This study adopted a descriptive research design, which is appropriate for examining phenomena as they exist and for capturing respondents' perceptions and experiences in real-world contexts (Creswell & Creswell, 2018). The design enabled a comprehensive analysis of the role of agro-industrial parks (AIPs) in promoting inclusive rural development and regional integration in Uganda. A mixed-methods approach, incorporating both qualitative and quantitative techniques, was employed to enhance the depth and breadth of the analysis. The integration of these approaches allows for triangulation of findings, thereby improving the reliability and validity of the results (Tashakkori & Teddlie, 2010). The study utilized a purposive sampling technique to select a total of 30 respondents who were considered information-rich and directly involved in agro-industrial park activities. These included smallholder farmers, agro-processors, local government officials, and park administrators. Purposive sampling is widely used in development research where the focus is on participants with specific knowledge and experience relevant to the study objectives (Patton, 2002). Data were collected using a combination of structured questionnaires, key informant interviews, and focus group discussions (FGDs). Questionnaires provided quantitative data on perceptions and outcomes related to AIPs, while interviews and FGDs generated in-depth qualitative

insights into stakeholder experiences and challenges. The use of multiple data collection methods facilitated methodological triangulation, enhancing the credibility and robustness of the findings (Denzin, 1978).

Findings and Discussion

The findings indicated that agro-industrial parks significantly contribute to inclusive rural development by improving household incomes, creating employment opportunities, and enhancing local agro-processing. However, infrastructure gaps, limited access to credit, and insufficient value addition remain major challenges.

Furthermore, AIPs play a critical role in promoting regional integration by facilitating cross-border trade, strengthening value chains, and attracting regional investors within the EAC framework.

Respondents' Perceptions on the Role of Agro-Industrial Parks in Inclusive Rural Development (N = 30)

Statement	SD	D	NS	A	SA	Mean(x)	Std. Dev. (σ)
AIPs have increased my/our household income	0(0%)	2(7%)	4(13%)	14(47%)	10(33%)	4.07	0.87
AIPs have created new job opportunities for youth in my community	0(0%)	1(3%)	3(10%)	15(50%)	11(37%)	4.20	0.74
AIPs have improved employment opportunities for women	1(3%)	2 (7%)	4 (13%)	14 (47%)	10 (33%)	4.07	0.87
AIPs have increased the proportion of produce	0 (0%)	2 (7%)	5 (17%)	16 (53%)	7 (23%)	3.93	0.82

processed locally							
AIPs have improved market stability and reduced post-harvest losses	0 (0%)	3 (10%)	5 (17%)	14 (47%)	8 (26%)	3.90	0.88
Infrastructure around the AIPs (roads, storage, utilities) meets the needs of producers	3 (10%)	8 (27%)	6 (20%)	10 (33%)	3 (10%)	3.00	1.19
Farmers have adequate access to affordable credit to supply produce to the AIPs	5 (17%)	10 (33%)	7 (23%)	6 (20%)	2 (7%)	2.67	1.15
Value addition at the AIPs is sufficient to maximize rural incomes	3 (10%)	9 (30%)	8 (27%)	7 (23%)	3 (10%)	2.93	1.16
AIPs have enabled cross-border trade in processed goods with other EAC countries	1 (3%)	4 (13%)	6 (20%)	13 (43%)	6 (20%)	3.67	1.03
Regional investors have been attracted to the AIPs	0 (0%)	4 (13%)	5 (17%)	15 (50%)	6 (20%)	3.77	0.94
Harmonization of EAC standards and policies would further improve the benefits of AIPs	0 (0%)	1 (3%)	3 (10%)	14 (47%)	12 (40%)	4.23	0.74

Source:

Findings and Discussion

The findings from the survey (N = 30) and qualitative interviews consistently indicated that agro-industrial parks (AIPs) are contributing to inclusive rural development and regional integration in Uganda, although key structural challenges remain.

Household Income Improvement (Mean = 4.07)

The high mean score (4.07) indicated strong agreement among respondents that AIPs have improved household incomes. A combined 80% of respondents agreed or strongly agreed, suggesting a significant positive impact.

This is reinforced by interview responses:

“Since the park started buying from us, my income has improved because we no longer depend on middlemen”

(Farmer, Soroti Agro-Industrial Park, 25 August 2025).

“We now earn more consistently because there is a ready market for our produce” (Farmer, Nwoya Agro-Industrial

Park, 1 September 2025).

These findings align with studies showing that agro-industrial parks improve farmer incomes through better market access and price stability (Food and Agriculture Organization (FAO), 2022; United Nations Industrial Development Organization (UNIDO), 2020).

However, a minority of respondents (20%) were neutral or disagreed, reflecting unequal access:

“Those far from the park still struggle to benefit fully due to transport costs” (Farmer, Nwoya, 3 September 2025).

This supported arguments that agro-industrialization can create spatial inequalities (World Bank, 2021).

Employment Creation (Mean = 4.20)

The highest mean score (4.20) indicated that employment creation is the most significant contribution of AIPs, with 87% of respondents agreeing or strongly agreeing.

Interview responses confirmed this:

“Many young people in our area are now employed in processing and packaging units” (Local Government Official, Soroti District, 28 August 2025).

“Youth who were previously unemployed are now working in transport and factory operations” (Park Administrator, Nwoya Agro-Industrial Park, 6 September 2025).

This aligns with global evidence that agro-industrial parks generate employment across value chains (UNIDO, 2020; World Bank, 2021).

However, qualitative responses reveal concerns about job quality:

“Most jobs are casual and not well-paying, especially for unskilled workers” (Agro-processor, Soroti, 10 September 2025).

This reflects studies that question the sustainability and quality of employment in agro-industrial zones (Dolan & Humphrey, 2000; United Nations Development Programme (UNDP), 2021).

Women’s Employment (Mean = 4.07)

A high mean (4.07) indicates improved employment opportunities for women, supported by 80% agreement.

“Women are now working in sorting, packaging, and processing, which was not common before” (Park Administrator, Soroti Agro-Industrial Park, 5 September 2025).

“I can now earn my own income without leaving my community” (Female Worker, Nwoya Agro-Industrial Park, 9 September 2025).

This finding is consistent with literature suggesting that agro-processing enhances women’s economic participation (FAO, 2022).

However, concerns remain:

“Women are mostly in low-paying roles compared to men in technical jobs” (Civil Society Representative, Kampala, 18 September 2025).

This supported critiques on gender inequality in value chains (Dolan & Humphrey, 2000).

Local Processing and Value Addition (Mean = 3.93 and 2.93)

While most respondents agreed that AIPs have increased local processing (Mean = 3.93), fewer agreed that value addition is sufficient (Mean = 2.93), indicating a gap between processing and advanced value addition.

“We now process cassava and citrus locally instead of selling raw produce” (Agro-processor, Soroti, 30 August 2025).

However:

“Most processing is basic; we lack machines for high-value products” (Park Administrator, Nwoya, 12 September 2025).

This aligned with studies showing that many African agro-industrial parks remain at primary processing levels (FAO, 2022), limiting competitiveness in global markets.

Market Stability and Post-Harvest Loss Reduction (Mean = 3.90)

A majority of respondents agreed that AIPs have improved market stability and reduced losses:

“We no longer lose crops after harvest because the park buys and stores them” (Farmer, Soroti, 7 September 2025).

This supported findings that agro-industrialization reduces post-harvest losses through improved storage and logistics (World Bank, 2021).

Infrastructure Constraints (Mean = 3.00)

The moderate mean (3.00) reflects mixed perceptions, with many respondents dissatisfied.

“Roads are still poor, especially during rainy seasons, making it hard to supply produce” (Farmer, Nwoya, 7 September 2025).

This aligned with evidence that infrastructure gaps limit agro-industrial effectiveness (African Development Bank (AfDB), 2021).

Access to Credit (Mean = 2.67)

The low mean (2.67) indicates a major constraint, with 50% of respondents disagreeing.

“We cannot access affordable loans to expand production” (Farmer, Soroti, 14 September 2025).

This supports findings that financial exclusion limits smallholder participation (International Fund for Agricultural Development (IFAD), 2021).

Regional Integration and Cross-Border Trade (Mean = 3.67)

A majority agreed that AIPs facilitate regional trade:

“We now export sunflower oil and juice to Kenya and South Sudan” (Trader, Soroti, 6 September 2025).

This aligned with literature that agro-industrial parks enhance cross-border trade and regional value chains (EAC Secretariat, 2023; UNIDO, 2020).

Attraction of Regional Investors (Mean = 3.77)

Respondents acknowledged increased investor interest:

“Investors from neighboring countries are setting up processing plants here” (Local Government Official, Soroti, 16 September 2025).

This supports findings that AIPs attract regional investment due to improved infrastructure and market access (UNIDO, 2020).

Need for Policy Harmonization (Mean = 4.23)

The highest consensus (Mean = 4.23) highlights the importance of regional policy alignment:

“If EAC countries harmonize standards, it will be easier to trade across borders” (Exporter, Kampala, 20 September 2025).

This aligns with regional integration studies emphasizing the role of policy harmonization in facilitating trade (EAC Secretariat, 2023; United Nations Economic Commission for Africa (UNECA), 2019).

Conclusion

The study concludes that agro-industrial parks have strong potential to drive inclusive rural development and regional integration in Uganda. However, addressing infrastructure deficits, improving access to finance, and strengthening policy coordination are essential to maximize their impact.

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