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Profiling the Conflict: Socio-Economic Factors in Farmer-Herder Conflict Dynamics in Southern Adamawa, Nigeria

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Abstract

This paper investigates the socio-economic underpinning of farmer-herder conflict in Southern Adamawa., Nigeria. A region marked by ecological transition, ethnic diversity, and overlapping land use systems. Drawing on secondary data, the study profiled key socio-economic characteristics, age, gender, education, income, land access, and mobility, of farmers and herders, and examined how this factors shaped livelihood strategies and exposure to conflict. The analysis is grounded in four interrelated theoretical frameworks: Frustration-Aggression Displacement, Social Conflict theory, Human Ecology, and the Sustainable Livelihoods Framework. Findings reveal that socio-economic diversity is not peripheral but central to understanding conflict dynamics. Age and experience influenced resilience and negotiation capacity. Gender roles and marital norms shapes exposure and coping strategies; and disparities in education and income affect access to resources and institutional support. These differences manifest in competing land use patterns, unequal power relations, and divergent conflict resolution approaches. The study concluded that addressing farmer-herder conflict requires context-sensitive interventions that recognize and respond to socio-economic heterogeneity. Policies must promote inclusive land governance, expand education access, especially for pastoralist, support livelihood diversification, and foster culturally grounded dialogue, without such nuanced, equity-driven strategies, peace building efforts risk being ineffective or exclusionary.

Keywords: Farmer-herder conflict, Socio-economic diversity, Land use, Pastoralism, Rural livelihoods, Peace-building.



Introduction

Across the globe, rural livelihoods are undergoing profound transformations, shaped by demographic shifts, environmental pressures, and evolving land use patterns. As Nyathi (2025) observes, these changes are not merely technical but deeply social, affecting how communities adapt and survive. In agrarian societies, the intersection of socio-economic diversity and resource competition has become a critical lens for understanding both resilience and vulnerability.

In sub-Saharan Africa, these dynamics are especially pronounced. According to Schlecht (2020), rural economies are governed by a complex interplay of tradition, mobility, and market integration. Farmers and herders, two dominant livelihood groups, often navigate overlapping claims to land, water, and grazing routes. One of the most significant developments has been the intensifying competition between farmers and herders over land access. Although the underlying causes remain contested, shifts in land use patterns are widely acknowledged as central drivers of this rivalry (Benjaminsenet *al.*, 2012). As traditional boundaries between land uses become increasingly blurred, localised disputes between agricultural and pastoral communities have escalated into protracted violence. These tensions are further compounded by demographic growth, climate-related stressors, and the erosion of local governance mechanisms. Moreover, sociocultural divisions, particularly where farmers and herders belong to distinct ethnic groups, can deepen hostilities and contribute to the ethnicisation of conflict (Shettimaand Tar, 2008). Historically, such interactions were often moderated through customary institutions and seasonal negotiation. However, recent decades have seen a rise in tensions, driven by climate variability, population growth, and governance shifts. For instance, Tamouet *al.* (2018), document how pastoralists in and around the W Biosphere Reserve in Benin face increasing competition for grazing land, exacerbated by environmental degradation and institutional fragmentation. These tensions are not solely resource-based; they are also embedded in socio-economic identities, including age, gender roles, education, and mobility (Ibrahim, 2024; Kristjansonet *al.*, 2014).

In sub-Saharan Africa, these dynamics are especially pronounced. Scholars have long noted that rural economies in sub-Saharan Africa are shaped by a dynamic interplay of tradition, mobility, and market integration (Turner *et al.*, 2011; Ellis, 2000). Farmers and herders, two dominant but distinct livelihood groups, often navigate overlapping claims to available land, water, and grazing routes (Kratli and Toulmin, 2020). Historically, such interactions were moderated through customary institutions and seasonal negotiation. However, recent decades have seen a rise in tensions, driven by climate variability, population growth, and governance shifts. These tensions are not solely resource-based; they are also embedded in socioeconomic identities, including age, gender roles, education, and mobility (Ibrahim, 2024; Kristjanson *et al.*, 2014).

In Nigeria, the farmer-herder interface has emerged as a major flashpoint for conflict, particularly in the Middle Belt region where ecological zones and livelihood systems converge. However, while the Middle Belt remains a hotspot, similar tensions have increasingly spread to other parts of the country, including the North-East (notably Adamawa and Taraba), the North-West, and parts of the South, driven by pastoral mobility, land pressure, and weak institutional responses (The International Crisis Group, 2017; Okoli&Atelhe, 2014; Blench, 2010)). Oyeboode (2025) further argues that rapid population growth, coupled with weak land tenure systems, has intensified competition over arable land and grazing corridors. This has led to localised violence with far-reaching implications for national cohesion, food security, and rural development. Importantly, socio-economic characteristics such as income levels, educational attainment, and land access play a decisive role in shaping livelihood strategies and exposure to risk (Ikhayere, 2022).



Adamawa State, located in northeastern Nigeria, offers a compelling case for examining the socio-economic dynamics of farmer–herder conflict. It straddles the ecological transition zone between the Sudan and Guinea savannahs, a region increasingly affected by displacement, land degradation, and competition over natural resources due to conflict and climate change (International Water Management Institute [IWMI], 2023). Adamawa hosts a diverse population of sedentary farmers and transhumant pastoralists. Within this broader context, Southern Adamawa stands out. Mercy Corps (2024) describes the region as a mosaic of ethnic groups, varied land tenure regimes, and a history of both cooperation and contestation between livelihood groups. This socio-economic heterogeneity, reflected in differences in age structures, gendered labour roles, income sources, and mobility patterns, creates fertile ground for exploring how these factors influence livelihood choices and the potential for conflict (Okwuluet *al.*, 2025).

Although research on farmer–herder conflict has expanded, much of it still focuses on broad patterns, conflict triggers, and security concerns. Socio-economic factors such as age, gender, education, income, land access, and mobility are often mentioned only briefly, usually as part of demographic overviews rather than treated as central analytical categories (Ikhayere, 2022; Okwuluet *al.*, 2025). This limited framing obscures how these characteristics shape the roles, responses, and vulnerabilities of farmers and herders in conflict settings. Kendrick and Sanders (2024) critique the term farmer–herder conflict itself, arguing that it oversimplifies the issue and masks deeper political and institutional dynamics. Their intervention does not dismiss socio-economic analysis; rather, it highlights how these factors are embedded within broader systems of governance, policy, and power. As Mercy Corps (2024) warns, interventions that fail to engage with these intersecting layers risk being poorly targeted, exclusionary, or ineffective.

In Southern Adamawa, the dynamics of farmer herder conflict are deeply embedded in local histories, livelihood patterns, and social identities. The region is marked by ethnic diversity, overlapping land use systems, and varied mobility practices, all of which influence how conflict unfolds and is experienced (UN-Environment Programme (UNEP), 2025.; Ibrahim, 2024). Yet, there remains limited clarity on how socio-economic diversity contributes to exposure, resilience, or escalation in these settings. Therefore, this study adopts a socio-economic lens to profile the conflict. Through a desk-based synthesis of secondary data, including peer-reviewed literature, institutional reports, and empirical studies, it aims to describe the socioeconomic characteristics of farmers and herders in Southern Adamawa, explore how these characteristics influence livelihood strategies and exposure to conflict, and assess the implications of socioeconomic diversity for conflict dynamics in the region.

Objectives

1. To examine the socio-economic characteristics of farmers and herders in Southern Adamawa, including age, gender, education, income, land access, and mobility.
2. To explore how these characteristics influence livelihood strategies and exposure to farmer–herder conflict in the area.
3. To assess the implications of socio-economic diversity on the conflict

Literature Review

The escalating farmer–herder conflict, particularly prevalent in sub-Saharan Africa, is a multifaceted issue deeply rooted in socio-economic dynamics rather than solely ethnic or religious differences (Okwulu et al., 2025; Udemadu et al., 2025). A comprehensive understanding necessitates a detailed profiling of the



socio-economic characteristics of both farmers and herders. This includes examining demographic data such as age, gender, household size, and educational attainment, which significantly influence resource management practices and conflict resolution approaches (Ikhayere, 2022; Okwulu et al., 2025). Furthermore, economic indicators like income levels, primary sources of livelihood (e.g., crop cultivation, livestock rearing, off-farm activities), land ownership patterns, and access to markets are crucial (Babura, 2018; Mercy Corps, 2024). For instance, farmers' reliance on rain-fed agriculture makes them vulnerable to climate variability, potentially leading to encroachment on traditional grazing routes, while herders' dependence on pasture and water resources drives their migratory patterns (IWMI, 2023). Access to credit, technology, and social safety nets also plays a pivotal role in shaping their resilience and adaptive capacities in the face of environmental and economic shocks (UNDP, 2022). The World Bank (2022) underscores that inclusive financial systems, digital infrastructure, and targeted social protection are essential for reducing vulnerability and enabling recovery in fragile contexts. These structural enablers intersect with local socio-economic profiles: for instance, farmers without access to credit or irrigation technologies may be pushed toward marginal lands, while herders lacking institutional support may be unable to adapt migratory routes, increasing the likelihood of conflict. Profiling these disparities is therefore critical to understanding how structural exclusion translates into spatial competition and conflict exposure. By meticulously detailing these socio-economic profiles, researchers can establish a foundational understanding of the distinct vulnerabilities and opportunities that characterize each group, thereby illuminating the underlying drivers of conflict.

The socio-economic characteristics identified in the profiling stage directly influence the livelihood strategies adopted by farmers and herders, and consequently, their exposure to conflict. For farmers, factors such as large household size, farming as the major source income, limited landholdings, poor soil fertility, low educational attainment, and lack of access to modern farming techniques can push them towards expanding cultivation into marginal lands, including traditional grazing reserves. While Ohadiugha and Gado (2025) focus primarily on policy and governance gaps, they underscore how land scarcity, climate-induced migration, and livelihood insecurity intensify spatial competition and resource pressure, reinforcing the structural and socio-economic roots of farmer-herder tensions. Conversely, herders facing shrinking pastures due to agricultural expansion, urbanisation, lack of access to other forage sites due to insecurity and climate change may be forced to alter their migratory routes, leading to increased contact and potential clashes with farming communities (Okwulu et al., 2025; Nwaoburu, 2025). The economic vulnerability of both groups can exacerbate tensions; for example, a poor harvest for farmers or significant livestock losses for herders can heighten competition over scarce resources, making them more prone to engaging in or being affected by conflict. Moreover, the absence of alternative livelihood opportunities can trap individuals in cycles of resource-dependent activities, intensifying the struggle for survival and increasing the likelihood of violent confrontations (Udemadue et al., 2025). Understanding these intricate linkages between socio-economic conditions, livelihood choices, and conflict exposure is essential for developing targeted interventions that address the root causes of the conflict.

The implications of socio-economic diversity on farmer-herder conflict are profound and often overlooked. Differences in wealth, social status, and political influence between farmer and herder communities can create power imbalances that complicate conflict resolution efforts (Ikhayere, 2022; Okwulu et al., 2025). For instance, if one group has greater access to political representation or legal recourse, their grievances might be prioritized, potentially marginalizing the other group and fuelling resentment. Furthermore, varying levels of education and access to information can lead to divergent perceptions of resource rights and responsibilities, hindering effective dialogue and negotiation (UNDP, 2022). The presence of diverse livelihood strategies within a single community, or across different communities, can also introduce complexities. For example, some individuals may engage in both farming and herding, blurring the lines of identity and potentially creating internal conflicts of interest



(Mercy Corps, 2024). Recognising and analysing these socio-economic diversities are critical for designing inclusive and equitable conflict resolution mechanisms. A nuanced understanding of how these differences manifest in resource access, power dynamics, and perceptions of justice is paramount for fostering sustainable peace and coexistence between farmer and herder communities. These dynamics underscore the importance of analysing how socioeconomic diversity, in terms of access to resources, institutional power, and livelihood options, shapes not only exposure to conflict but also the design and effectiveness of peacebuilding strategies.

Udemaduet *al.*, (2025), reinforce this view by identifying key structural and relational drivers of conflict , including infrastructure development, climate change, poor governance, and cattle theft, alongside challenges such as insecurity, historical grievances, resource scarcity, political interference, mistrust, and cultural-linguistic fragmentation. They propose a multidimensional peacebuilding strategy centred on reconciliation, inclusive participation, community empowerment, and livelihood development. Crucially, they caution that while environmental stressors are increasingly acknowledged, their downstream socio-economic effects, particularly on mobility, trust, and intergroup relations , remain underexplored

Theoretical Framework

The farmer- herder conflict in Southern Adamawa can be examined through four interrelated theoretical lenses that illuminate its psychological, structural, ecological and livelihood dimensions. Frustration Aggression Displacement Theory, developed by Dollard, Doob, Miller, Mowrer and Sears (1939), posits that aggression arises when individuals are blocked from achieving valued goals. When the true source of frustration, such as environmental degradation or institutional neglect, is inaccessible, aggression is often displaced onto more available targets. This theory helps explain how socio-economic stressors like land scarcity, income loss or restricted mobility may lead to retaliatory violence between farmers and herders, even when neither group is directly responsible for the root causes. It supports analysis of how blocked livelihood aspirations contribute to conflict exposure.

Social Conflict Theory, rooted in the work of Marx and Engels (1848), views society as structured by inequalities in power and resource distribution. Conflict arises when dominant groups control access to land, capital and state protection, while marginalised groups struggle to secure their livelihoods. This theory is useful for profiling how disparities in land tenure, education, income and institutional access shape the vulnerability of farmers and herders. It also explains how structural exclusion reinforces competition and resentment between groups with overlapping but unequal claims to land and resources.

Human Ecology Theory, introduced by Park and Burgess (1925), and refined by Hawley (1950), focuses on how human populations adapt to their physical and social environments. It provides a framework for understanding how demographic traits, such as age, gender, education and mobility, interact with ecological pressures like land degradation and climate variability. This theory supports the profiling of farmers and herders by examining how their socio-economic characteristics influence settlement patterns, land use decisions and exposure to environmental stressors that heighten conflict risk.

The Sustainable Livelihoods Framework, developed by Chambers and Conway (1992), offers a holistic model for assessing how access to five forms of capital, human, natural, financial, physical and social, shapes livelihood strategies and resilience. It is particularly relevant for analysing how education, income, land access, infrastructure and social networks influence the capacity of farmers and herders to cope with shocks and avoid conflict. This framework enables a systematic profiling of livelihood assets and vulnerabilities, linking socio-economic characteristics to adaptive behaviour and peacebuilding potential.



Socio-Economic Factors in Farmer-Herder conflict in Southern Adamawa

The Socio-Economic Characteristics of Farmers and Herders

The socio-economic characteristics of farmers and herders in Southern Adamawa are diverse and deeply embedded within cultural, environmental and institutional contexts. These characteristics, age, gender, marital status, education, household size, experience and farm or herd size, serve as critical indicators of livelihood capacity, social status and vulnerability to conflict. Age plays a pivotal role in shaping experience, resilience and adaptability. Farmers in the region typically fall within the economically active age bracket of 27 to 49 years, with studies reporting mean ages between 41 and 44 years (Mwada, 2017; Shelleng& Tabitha, 2021). Herders, while often younger, also demonstrate age-linked expertise, with 55 per cent falling within the 31 to 40 age range (Kubkomawaet *al.*, 2017). Older herders possess deep knowledge of grazing routes and livestock management, though they increasingly rely on younger men for physically demanding tasks (Nassef, 2025, Schlecht, 2020).

Gender roles are distinctly defined across both groups. Herding remains a male-dominated enterprise, with 75 to 80 per cent of cattle owners being men (Kubkomawaet *al.*, 2017). Women contribute primarily through milking and domestic responsibilities, though they occasionally assume herding roles in the absence of men (Sasay, 2023). Crop farming, by contrast, is more gender-inclusive. Both men and women actively participate, although men dominate in land ownership and crop volume (FAO, 2018; Habibuet *al.*, 2019). Gendered preferences persist, with women tending towards subsistence crops and men favouring income-generating varieties.

Marital status further influences socio-economic behaviour. Most farmers are married, with studies reporting rates between 69.6 and 86.9 per cent (Gwandiet *al.*, 2023; Sani *et al.*, 2023). Among herders, marriage is culturally entrenched, often arranged and polygamous, serving as a mechanism for alliance-building and social cohesion (Ismail, 1994; UNHCR, 2023). Education levels remain low across both groups, particularly among herders. Cai, Gao, Zhou and Qiao, (2023), Myagmarsuren and Batkhuyag (2021) found that majority of herder/pastoralists lacked formal education, and nomadic lifestyles continue to hinder school attendance (OCHA, 2023). Nomadic education is increasingly recognised as a transformative tool for peacebuilding and socio-economic empowerment (Luzi&Gulbrandson, 2010).

Household size and experience also shape livelihood dynamics. Larger households provide labour but exert pressure on land and resources, often leading to expansion into marginal or grazing lands (Moreda, 2023; Demeke, 2024). Experience enhances mastery and influence, with seasoned farmers and herders demonstrating greater adaptability and negotiation capacity (Clarson, 2022; Gbadebo, 2021). Farm and herd sizes reflect economic capacity and influence land use patterns. Larger farms and herds increase competition over resources, often resulting in encroachment and conflict (Brottem, 2021; Tamouet *al.*, 2018).

How Socio-Economic Characteristics Influence Livelihood Strategies and Exposure to Conflict

Socio-economic characteristics directly influence livelihood strategies and determine the degree of exposure to conflict. Farmers and herders with higher levels of education, stable marital status, diversified income sources and greater experience are generally better positioned to adopt adaptive strategies and mitigate conflict risks. Conversely, limited access to resources and low socio-economic status tend to exacerbate competition over land, water and pasture, fuelling tensions and mistrust (FAO, 1999; Oladipoet *al.*, 2025).

Age and gender shape patterns of conflict engagement and resolution. According to Deressaet *al.*, (2008), older individuals possess greater resilience and institutional knowledge, which enhances their capacity for negotiation and peaceful dispute resolution. Younger actors, though often more energetic, may lack the



social capital necessary for constructive engagement (Eva *et al.*, 2020). Male dominance in both farming and herding correlates with higher exposure to violent encounters, although the impact of conflict is frequently gender-neutral, affecting entire households and communities (Buvinic, Gupta, Casabonne, & Verwimp, 2013; Bloem, Damon, Francis, & Mitchell, 2025).

Marital status influences risk behaviour and community orientation. Ogwuiké, Afiavi, Vivian, Obinna, (2025), notes that married individuals tend to be more cautious and socially responsible, whereas single or divorced actors may exhibit higher risk-taking tendencies. Education enhances conflict literacy, enabling individuals to comprehend and apply mitigation strategies more effectively. As Ofuoku *et al.*, (2008), observe, farmers with formal education are more likely to adopt structured approaches to land use planning, resource-sharing agreements and integrated farming practices, thereby reducing the potential for conflict.

Household size and experience also shape land use patterns and social dynamics. Larger households often expand cultivation or grazing areas, which increases exposure to conflict. Experienced farmers may assert land claims and resist sharing, while herders with deep knowledge of grazing routes may insist on traditional access. Gbadebo (2021), highlights how both groups can use experience to promote dialogue, capacity building and resource-sharing agreements. Farm and herd sizes further complicate resource competition, with larger operations exerting greater ecological pressure and increasing the likelihood of encroachment and crop damage (Wanglin *et al.*, 2022).

The Implications of Socio-Economic Diversity on Conflict

The diversity in socio-economic characteristics among farmers and herders contributes to differentiated conflict experiences and responses. Variations in age, education, gender, marital status, household size, experience and farm or herd scale influence perceptions of entitlement, resource claims and negotiation capacity. These differences often manifest in competing land use patterns, unequal access to resources and divergent approaches to conflict resolution.

Gendered roles and marital norms shape conflict trajectories in distinct ways. Male dominance is frequently associated with direct involvement in confrontations, while women, though less visible in formal negotiations, often bear the brunt of social and economic consequences. As noted by United Nations High Commission for Refugees (UNHCR) (2023), marital alliances among herders serve as informal mechanisms for cohesion and conflict mitigation, reinforcing traditional networks and social capital (Abdullahi, 2023). Educational disparities further complicate conflict dynamics. Farmers with formal education are more likely to adopt structured mitigation strategies, including land use planning and institutional engagement, whereas herders with limited schooling may rely on oral traditions, customary law and informal negotiation networks.

Household size and experience also influence land use behaviour and social power. Larger households and experienced actors may assert stronger claims to land and resources, drawing on generational tenure or customary rights. Farm and herd scale affects ecological pressure and the intensity of competition. According to Ann and Wolfgang (1994), wealthier farmers and herders with large operations often wield greater social influence, which can marginalise smaller actors and intensify tensions (Amaka, 2022). The expansion of farms and herds into contested or poorly demarcated spaces erodes trust and increases the likelihood of conflict, particularly where institutional arbitration is weak or absent.

Understanding these socio-economic nuances is essential for designing inclusive peacebuilding and livelihood support programmes. The interplay of these variables must inform targeted interventions that address the root causes of farmer–herder conflict in Southern Adamawa. Conflict-sensitive development



strategies should account for the socio-economic diversity of actors, promote equitable access to resources and foster dialogue across cultural and institutional divides. Only through such nuanced and contextually grounded approaches can sustainable peace and resilience be achieved in the region.

Conclusion and Recommendations

This paper examined the socio-economic factors shaping farmer–herder dynamics in Southern Adamawa and found that the socio-economic characteristics of both groups are not only diverse but profoundly influential in determining livelihood strategies and conflict trajectories. Variables such as age, gender, marital status, education and household size shape access to resources, decision-making capacity and adaptability to change. These factors also influence how individuals engage with conflict, whether through confrontation, negotiation or avoidance.

The findings underscore that socio-economic diversity contributes to differentiated experiences of conflict. Larger households, wealthier farmers and experienced herders often assert stronger claims to land and resources, while marginalised groups face exclusion and heightened vulnerability. Education emerges as a critical lever for peacebuilding, particularly among herders, where nomadic education remains underutilised despite its transformative potential. The study affirms that understanding socio-economic profiles is not merely an academic exercise, it is foundational to designing effective, equitable and contextually grounded solutions to conflict in Southern Adamawa and similar settings.

To address farmer–herder conflict sustainably, interventions must be tailored to the socio-economic realities of both groups. This includes promoting inclusive land governance in which demarcating clear farming and grazing boundaries, expanding access to education through Investment in education, supporting livelihood diversification through sustainable infrastructure for both farmers and herders is crucial to reducing violent encounters and fostering dialogue across cultural and institutional divides via strengthen local conflict resolution mechanisms., livelihood diversification, and fostering sustainable coexistence.

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