AN ASSESSMENT OF UNGOVERNED SPACES AND FOOD INSECURITY IN NIGER STATE, NIGERIA

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Article Info

ABSTRACT

Insecurity and governance breakdown remain critical development challenges in many parts of Nigeria, particularly in rural areas where state presence is weak or non-existent. This study therefore assessed the ungoverned spaces and food insecurity in Niger State, Nigeria. The study objectives includes to identify the defining characteristics of ungoverned spaces, examined governance and surveillance efforts in these areas, assessed the impact of insecurity on food production and access. Grounded in the Fragile State Theory and Human Security Theory, the research underscored the interrelation between weak state authority, human vulnerability, and systemic insecurity. A cross-sectional survey design was adopted using a triangulated methodological approach, which combined quantitative analysis of 389 structured questionnaires out of the sample size of 400 with key informant interviews. Statistical tests such as Spearman's Rank Correlation and the Mann-Whitney U test were employed to test the hypotheses formulated for the study. Findings revealed that the absence of effective government presence and the dominance of non-state armed actors have created zones of insecurity where farming, trade, and movement are severely restricted. Surveillance and policing mechanisms, especially those driven by the state, were widely seen as inadequate, while community-based vigilance systems proved relatively more effective. Insecurity significantly hindered access to farmland and markets, exacerbating poverty and food shortages, with a large majority of households reducing meal frequency or relying on humanitarian aid. Coping strategies, though prevalent, were largely unsustainable. The study concluded that food insecurity in ungoverned areas is multidimensional, deeply rooted in structural governance failures. It therefore recommended among others that strengthening community security systems, restoring access to agricultural livelihoods, integrating traditional institutions into governance structures, and adopting a people-centred, multi-sectoral approach to security and development planning to address the root causes of insecurity and restoring state legitimacy in vulnerable communities.

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INTRODUCTION

Food insecurity is a pressing global challenge, affecting over 735 million people in 2022 (FAO, 2023), with Sub-Saharan Africa bearing a disproportionate burden. The problem is multifaceted, driven by environmental shocks, poor infrastructure, market access barriers, governance failures, and violent conflict, which create a self-reinforcing cycle of instability and hunger. In Niger State, one of Nigeria's largest agricultural producers, food insecurity is persistent and structurally embedded. Agriculture is the backbone of livelihoods, yet production is undermined by climatic variability, infrastructural deficits, economic marginalisation, and escalating insecurity. These trends mirror broader patterns in fragile African states where overlapping vulnerabilities deepen humanitarian crises.

Frequent climatic shocks, erratic rainfall, droughts, floods, and pest invasions, shorten growing seasons, degrade soils, and reduce yields. Subsistence farmers face limited access to irrigation, improved seeds, and climate-resilient inputs. Climate change and environmental degradation are shrinking arable land and threatening long-term agricultural sustainability. Poor roads, inadequate irrigation, lack of storage facilities, and unreliable electricity severely limit farmers' ability to transport goods, reduce

post-harvest losses, and access inputs. Seasonal inaccessibility worsens market inefficiencies, inflates food prices, and erodes purchasing power, particularly among vulnerable populations. Women and youth face additional barriers due to discriminatory land tenure systems, lack of credit, and limited decision-making roles, perpetuating cycles of poverty.

The most critical factor deepening food insecurity is violent conflict. Armed banditry, insurgency, and communal clashes have created "ungoverned spaces" where non-state armed groups control territory, impose illegal levies, destroy crops, and displace communities. Governance in these areas is minimal or absent, replaced by coercive, parallel systems of authority. Policy inconsistency, corruption, and weak institutional capacity compound the crisis. Nigeria's experience mirrors other fragile states such as South Sudan, Somalia, and the DRC. Across the country, insecurity—from Boko Haram in the North-East to farmer-herder clashes in the Middle Belt—has crippled agricultural output. In Niger State, local government areas like Shiroro, Munya, Mariga, and Rafi are epicentres of conflict, driving farmers from their land and causing steep food inflation (37.9% in early 2024).

Over 2.7 million people in the North-Central zone are projected to face crisis-level food insecurity during the upcoming lean season.

Addressing food insecurity in Niger State demands a holistic, multisectoral approach that goes beyond food aid and agricultural inputs. Priorities include reclaiming ungoverned spaces, restoring governance, ensuring security, rebuilding rural livelihoods, and supporting community-led resilience strategies. This study investigates how ungoverned spaces exacerbate food insecurity, their impact on agricultural systems and daily life, and potential governance reforms to promote sustainable, secure food systems in conflict-affected regions.

Statement of the Problem

Niger State, once a cornerstone of Nigeria's agricultural output, is now mired in a deepening food crisis marked by widespread hunger, malnutrition, and the collapse of rural livelihoods. Despite its vast agrarian potential, the state's agricultural base has been eroded by a combination of escalating insecurity and chronic governance failures. Central to this decline is the emergence of ungoverned spaces, territories where the Nigerian state either lacks the capacity or the will to maintain control, turning many rural areas into hubs of lawlessness. In these power vacuums, armed bandits, insurgents, and criminal gangs have established de facto authority, imposing illicit taxes, destroying crops, and engaging in violence that has paralyzed farming and displaced thousands. Local Government Areas such as Rafi, Shiroro, Mariga, and Borgu have been hit hardest, with humanitarian needs rising sharply as planting cycles are disrupted, harvests diminish, and farmlands are abandoned.

These security crises are compounded by the breakdown of basic infrastructure and public services. Schools, clinics, and markets have closed, roads have become impassable, and law enforcement is absent or ineffective. As a result, rural communities are cut off from agricultural policies, humanitarian aid, and development initiatives, leaving them to negotiate survival with armed groups or face violent reprisals. Even when national agricultural programs exist, insecurity, corruption, and poor targeting often prevent them from reaching the most affected zones.

Environmental pressures further intensify the crisis, creating a destructive feedback loop between insecurity and food scarcity. Erratic rainfall, droughts, floods, and land degradation reduce soil fertility, shorten growing seasons, and heighten farming risks. Insecure conditions discourage cultivation, while years of conflict and environmental decline have rendered many lands unproductive even where some stability has returned. The interplay between environmental shocks and violent conflict underscores the multidimensional nature of Niger State's food insecurity, which requires responses that extend beyond isolated agricultural or security measures.

Efforts to address these challenges are hampered by a critical lack of empirical data linking ungoverned spaces to patterns of food insecurity in the state. While research and policy attention have largely focused on Boko Haram in Nigeria's North-East, the worsening crisis in the North-Central region remains under-documented. This knowledge gap has led to policy blind spots, misallocated resources, and interventions that fail to address the unique dynamics of ungoverned territories in Niger State. Without accurate data, it is difficult to measure agricultural losses, understand community coping mechanisms, or track the spread of food insecurity, undermining evidence-based decision-making and accountability.

State responses have been fragmented, reactive, and short-term, with military operations such as Operation Whirl Punch achieving only sporadic and unsustainable gains. Community policing and vigilante efforts have sometimes provided local security but raise concerns about human rights abuses and coordination gaps. Development programs have similarly faltered, constrained by insecurity, poor planning, and corruption. The result is a persistent cycle of violence, displacement, and deprivation that undermines the state's rural economy and threatens broader regional stability.

If left unaddressed, the convergence of insecurity, state withdrawal, infrastructural decay, and environmental degradation will deepen poverty, exacerbate food shortages, fuel social fragmentation, and heighten the risk of radicalisation. A deeper investigation into the specific role of ungoverned spaces in driving food insecurity is therefore essential to inform integrated, context-specific strategies that restore governance, strengthen rural resilience, and rebuild sustainable food systems in Niger State.

Aim and Objective of the Study

To aim of this to study was to assess the impact of ungoverned spaces on food insecurity in Niger State, Nigeria.

Specific Objectives

1. To identify the characteristics and indicators of ungoverned spaces in Niger State.
2. To examine existing governance and surveillance measures for managing insecurity in ungoverned areas in Niger State.
3. To assess the impact of insecurity in ungoverned spaces on food production and access in Niger State.

Research Questions

1. What are the key characteristics and indicators of ungoverned spaces in Niger State?
2. What existing governance and surveillance measures have been implemented to address insecurity in these ungoverned areas?
3. How does insecurity in ungoverned spaces affect food production and access in Niger State?

Research Hypotheses

The following hypotheses were formulated and tested for the study:

Hypothesis (H_{01}): There is no significant correlation between community perceptions of government presence and perceptions of security threats in ungoverned spaces.

Hypothesis (H_{02}): There is no significant difference in perceived insecurity levels between communities with higher ratings of local surveillance efforts and those with lower ratings.

Hypothesis (H_{03}): There is no significant positive correlation between insecurity perception scores and household food production access scores.

Significance of the Study

This study holds both academic and practical significance, as it explores the critical intersection between ungoverned spaces and food insecurity two interrelated challenges that pose serious threats to the social, economic, and political stability of rural areas in Niger State and Nigeria at large. From an academic perspective, the research makes a meaningful contribution to the growing body of literature on state fragility, rural insecurity, and food systems in sub-Saharan Africa. Specifically, it advances the discourse on human security by analysing how the erosion of formal state authority in rural territories disrupts agricultural productivity and access to food. This disruption occurs as a result of the proliferation of violence and the substitution of formal governance with informal rule imposed by non-state actors, such as armed groups and criminal syndicates. These actors exploit governance vacuums through practices like extortion, forced taxation, and

violent enforcement of control, further exacerbating poverty, displacement, and food deprivation. In examining these dynamics, this research illuminates how ungoverned spaces are not merely security voids but also zones of contested authority where local populations must navigate survival amidst uncertainty and exploitation.

The study enhances both theoretical and empirical insights into spatial governance by placing ungoverned regions within the context of state capacity and development. While previous research has primarily concentrated on national-level perspectives or the conflict-ridden North-East zone of Nigeria, this work shifts the focus to the less-explored areas of North-Central Nigeria, specifically rural communities in Niger State. This approach reveals regional disparities in the experience of insecurity and deepens the understanding of state fragility within federal systems. Additionally, the research links governance deficiencies to localised food insecurity, utilising empirical data from structured household surveys and semi-structured interviews with key stakeholders. These data sources offer valuable insights into the daily challenges faced by affected communities, facilitating the development of context-specific explanations that can enhance both theoretical frameworks and practical applications. Consequently, the study emphasises the significance of in-depth, field-based research in bridging the gap between broad policy assumptions and the lived experiences of insecurity and deprivation at the micro level.

In practical terms, the study offers valuable insights that can inform policymaking, program design, and strategic interventions by government institutions, non-governmental organisations, and international development actors. By identifying specific communities most affected by ungoverned conditions and documenting the mechanisms through which insecurity disrupts food production, access, and distribution, the findings will help improve the targeting of agricultural, humanitarian, and security resources. For instance, agencies such as the Federal Ministry of Agriculture and Food Security, the Niger State Emergency Management Agency, and the National Emergency Management Agency (NEMA) can benefit from the study's findings to design more responsive food security interventions. Likewise, international partners such as the World Food Programme (WFP), the Food and Agriculture Organisation (FAO), and the International Organisation for Migration (IOM) can leverage the evidence to tailor emergency food aid, livelihood support, and displacement management strategies to local needs and conflict dynamics.

Scope of the Study

This study was geographically situated within Niger State, Nigeria's largest state by landmass and a central agricultural hub in the country. The research pays particular attention to selected Local Government Areas (LGAs) that have been severely impacted by insecurity and the emergence of ungoverned spaces. These include areas such as Rafi, Shiroro, Mariga, Munya, and Borgu, which have experienced persistent violence, recurrent displacement of rural populations, and the erosion of state authority. In these territories, criminal groups and insurgent actors have exploited governance vacuums to establish informal rule, thereby destabilising socio-economic life, especially agricultural production and food distribution. While the study acknowledges the broader food insecurity trends affecting the entire state, it narrows its focus to those localities where insecurity has become deeply entrenched, resulting in disrupted farming cycles, abandoned farmlands, and limited market access. Thematically, the study focuses on examining the intersection between ungoverned spaces and food insecurity, particularly how the absence or weakness of state institutions influences agricultural disruptions, hinders food access, and exacerbates rural poverty.

The analysis was grounded in the period from 2020 to 2025 a time frame during which Niger State witnessed a notable escalation in rural insecurity, rising food prices, and increased levels of hunger and displacement. By focusing on this five-year window, the study captures both the structural and immediate effects of insecurity on the food system. Methodologically, the research employs a quantitative approach, relying on structured questionnaires administered to a representative sample of households within the most severely affected local government areas (LGAs). These instruments are designed to elicit information on food access, agricultural activity, exposure to violence, and coping strategies. The study, however, does not delve into the technical aspects of agricultural science, such as crop genetics, soil composition, irrigation engineering, or nutrition science. Nor does it engage directly with the medical consequences of malnutrition or food deprivation. Instead, its scope is confined to the socio-economic and security-related dimensions of food insecurity, prioritising the lived experiences of farming communities, the governance environment, and the structural constraints that perpetuate hunger and vulnerability in conflict-affected rural spaces.

Justification for the Study

This study is justified by the growing insecurity and governance vacuum affecting rural communities in Niger State, which has led to widespread displacement, abandoned farmlands, and disrupted food systems. Despite increasing attention to food insecurity in Nigeria, limited research has empirically examined the role of ungoverned spaces as a root cause of food system collapse in affected areas. By investigating the correlation between state absence and food insecurity, this study addresses a critical knowledge gap and provides evidence necessary for targeted interventions. Its findings will offer actionable insights for government agencies, development partners, and local stakeholders to enhance food security and re-establish governance structures in fragile environments. Ultimately, the study supports broader efforts to stabilise rural livelihoods and advance peace and food resilience in Northern Nigeria.

LITERATURE REVIEW

This section is devoted to a review of relevant and related literature with a theoretical orientation of the findings. The literature review involves analysing books, reports, publications, newspapers, magazines, academic journal articles, archival materials, and internet-based documents, among others, that are relevant to the topic under study.

Conceptual Review:

Food Security

Food security is defined as a condition wherein all people, at all times, have physical, social, and economic access to enough safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (FAO, 1996). It is a multi-dimensional concept that rests upon four core pillars availability, access, utilization, and stability each representing an essential component of a robust and resilient food system (FAO, IFAD, UNICEF, WFP, & WHO, 2023). In this context, food security emerges as more than an economic or agricultural issue it becomes an existential threat tied to questions of state legitimacy, communal resilience, and survival. In rural Niger State, where state institutions have weakened, food security is no longer merely about agricultural production or economic access. In this light, understanding food security within the context of Niger State is critical for addressing its root causes and for crafting policies that can foster stability, resilience, and recovery. Ultimately, this approach emphasizes that food security is inseparable from the broader dynamics of governance, peacebuilding, and sustainable development in Nigeria's rural landscapes.

Ungoverned Spaces

The concept of "ungoverned spaces" emerged within international security discourse to describe areas where state authority is weakened or altogether absent, allowing armed groups and other non-state actors to operate with relative impunity (Clunan & Trinkunas, 2010). Unlike traditional definitions of state sovereignty, which presume a state's ability to maintain a monopoly of force across its borders, ungoverned spaces arise from both structural and functional failures of governance. These spaces are defined not only by their geographical characteristics but also by their social and institutional dynamics. According to Rotberg

(2003), an ungoverned space is "a physical or social area where the state has failed to assert its monopoly of force and where its legitimacy and effectiveness are contested or ignored." In this sense, ungoverned spaces are as much about a crisis of legitimacy and institutional erosion as about a physical void of state presence. In Nigeria, the phenomenon of ungoverned spaces has become increasingly central to security and development discourse, especially within rural communities. In Niger State, Nigeria's largest state by land area and one of its most productive agricultural hubs, ungoverned spaces have emerged due to a confluence of factors, including the erosion of institutional legitimacy, systemic corruption, porous borders, and chronic underinvestment in rural infrastructure and security.

Insecurity

Insecurity, within the context of this study, is defined as a state of vulnerability arising from the threat or actual experience of violence, instability, or uncertainty. It encompasses both overt physical threats such as armed attacks, abductions, communal clashes, and terrorist incidents as well as structural threats rooted in economic deprivation, social exclusion, and institutional marginalization (Baldwin, 1997). In Nigeria, and especially in Niger State, the dynamics of insecurity have evolved far beyond the traditional characterization of a mere breakdown of law and order. Instead, insecurity has become a multi layered crisis that intertwines state fragility, contested governance, and systemic institutional failures, aligning closely with the theoretical lens of human security and state legitimacy.

Insecurity in Niger State operates not just as a physical threat, but as a profound structural challenge that exposes the limits of state capacity. The rural state is increasingly defined by its absence, marked by a paucity of basic infrastructure, under resourced security forces, and weakened local government institutions. In this vacuum, communities have been forced to navigate a dangerous and unpredictable terrain, relying upon traditional or ad hoc coping strategies such as night time planting, communal vigilante patrols, and covert market transactions to secure their livelihoods. Yet, these coping mechanisms, while resilient, remain highly precarious, underscoring the deepening vulnerability and fragility of rural life.

Human Security

Human security emerged in international discourse in the 1990s as a shift from traditional, state centric notions of security towards a more people centered approach that prioritises the protection of individuals and communities from a broad range of threats (UNDP, 1994). The concept goes beyond the absence of war and direct violence, focusing on creating conditions where people can live free from fear, want, and vulnerability. According to the United Nations Development Programme (1994), human security has seven core dimensions: economic security, food security, health security, environmental security, personal security, community security, and political security. Together, these elements underscore that peace and stability are inextricably linked with social justice, institutional legitimacy, and inclusive economic growth. In the context of rural Niger State, the concept of human security is especially relevant because it captures the intersection of ungoverned spaces, food insecurity, and communal vulnerability.

Key Components of Human Security

The human security framework offers a comprehensive lens for analyzing the intersection of conflict, governance, and livelihood in fragile regions. Unlike traditional security paradigms that focus solely on state sovereignty and military threats, human security emphasizes the protection of individuals from critical and pervasive threats to their survival, well-being, and dignity. The concept is multidimensional and comprises seven interlinked components: economic, food, health, environmental, personal, community, and political security. Each of these dimensions provides a pathway through which ungoverned spaces and insecurity in Niger State undermine local resilience and exacerbate food insecurity.

1. Economic Security

Economic security entails access to a stable source of income and productive resources. In Niger State, the proliferation of ungoverned spaces has crippled economic activities, especially agriculture the mainstay of the local economy. Farmers are unable to cultivate or harvest due to the fear of abduction or attack by armed groups, particularly in LGAs such as Shiroro and Munya. This has led to a loss of livelihoods and deepened rural poverty, particularly among subsistence farmers and market women (Aliyu & Ibrahim, 2021). The erosion of economic security reinforces household vulnerability and compromises long-term food access.

2. Food Security

At the core of the study research lies food security, which is defined by FAO (1996) as a situation in which "all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food." The food security component of human security is directly disrupted in ungoverned areas due to limited access to farmland, destruction of stored crops, extortion at rural markets, and fear-induced displacement. In Munya and Shiroro LGAs, communities report reduced food availability and accessibility as a result of blocked supply chains and abandonment of agricultural fields due to threats posed by insurgents and bandits (Cadre Harmonisé, 2023).

3. Health Security

Health security concerns access to essential healthcare and protection from disease. Insecurity in Niger State has significantly reduced access to medical services as many clinics in ungoverned spaces are either abandoned or non-functional. Displaced persons living in informal settlements are especially vulnerable to malnutrition and water-borne diseases due to overcrowding, poor sanitation, and limited food supplies (International Crisis Group, 2022). This health insecurity, combined with food shortages, further weakens the population's ability to withstand economic and environmental shocks.

4. Environmental Security

Environmental security involves the sustainable management of natural resources and protection from environmental degradation. In ungoverned parts of Niger State, unsupervised use of forest lands, uncontrolled grazing, and the absence of regulatory enforcement have led to severe land degradation. Environmental pressure, such as desertification and declining soil fertility, combined with insecurity, has sparked herder-farmer clashes over access to dwindling arable land and water resources (Ajayi, 2020). These ecological tensions exacerbate displacement and food production challenges.

5. Personal Security

Perhaps the most visibly affected dimension in ungoverned spaces is personal security. The absence of effective law enforcement and military deterrents in Shiroro and Munya has allowed armed groups to thrive, carrying out kidnappings, extortion, sexual violence, and killings with impunity. This climate of fear paralyzes daily life, reduces mobility, and dissuades individuals from engaging in farming or trade. In many cases, the psychological impact of recurrent attacks contributes to trauma and hopelessness among rural populations (ACLED, 2023).

6. Community Security

Community security relates to the preservation of cultural identity, social cohesion, and traditional governance institutions. In Niger State, insecurity and ungoverned conditions have led to the breakdown of communal structures and leadership hierarchies. Traditional rulers and elders who once mediated disputes and organized communal labor are either disrespected or co-opted by armed groups. Displacement further undermines community ties, disrupting cooperation in food production, shared security, and social capital.

7. Political Security

Political security ensures that individuals enjoy basic civil rights and are protected from political repression and state neglect. The presence of ungoverned spaces in Niger State is symptomatic of political marginalization and weak state capacity. Many communities feel abandoned by the government and have lost faith in formal institutions. This political alienation fuels distrust, reduces civic participation, and may even incentivize communities to rely on non-state actors for security and justice, further weakening the legitimacy of the state (Rotberg, 2023).

By applying the human security framework, this study captures the full spectrum of vulnerabilities experienced by rural populations in Niger State. The seven components underscore how ungoverned spaces are not merely zones of absent governance, but arenas where multidimensional insecurities converge disrupting food systems, displacing communities, and undermining human dignity. Addressing food insecurity in such contexts requires not only agricultural interventions but also political will, community-based protection strategies, and the restoration of state legitimacy.

Existing Governance and Surveillance Measures for Managing Insecurity in Ungoverned Areas

The challenge of managing insecurity in ungoverned spaces represents one of the most pressing contemporary security concerns globally. These areas, characterised by weak or absent state authority, have increasingly become breeding grounds for various forms of criminal activities, terrorism, and social instability. The global discourse on ungoverned territories has evolved significantly, particularly following the events of September 11, 2001, which highlighted how remote, poorly governed areas could become launching pads for transnational threats. This literature review examines the existing governance and surveillance measures employed to manage insecurity in ungoverned areas, with specific focus on Niger State, Nigeria.

The international community's understanding of ungoverned spaces has been fundamentally shaped by post-Cold War security paradigms and the recognition that traditional state-centric approaches to security are insufficient in addressing contemporary threats. Clapham (2020) argues that the concept of "ungoverned spaces" itself reflects Western-centric assumptions about what constitutes proper governance, often overlooking indigenous governance systems that may exist in these areas. The global approach to managing such spaces has typically involved a combination of military intervention, capacity building, and institutional strengthening programmes.

International governance frameworks have increasingly recognised the need for multi-dimensional approaches to addressing insecurity in ungoverned areas. The United Nations' peacebuilding architecture, as outlined in the Peacebuilding Commission's strategic frameworks, emphasises the importance of establishing legitimate governance structures whilst simultaneously addressing immediate security concerns (United Nations Peacebuilding Commission, 2021). This approach recognises that sustainable security cannot be achieved through surveillance and military measures alone but requires the establishment of legitimate governance institutions that can provide basic services and maintain social cohesion.

The African continent presents unique challenges and opportunities in addressing governance deficits in ungoverned areas. The legacy of colonial boundary-drawing, which often created states with artificial borders that did not correspond to ethnic, cultural, or economic realities, has contributed to persistent governance challenges across the continent. Herbst (2020) argues that many African states have struggled to project authority beyond capital cities and major urban centres, creating extensive ungoverned or under-governed spaces that become vulnerable to various forms of insecurity.

Nigeria's approach to managing insecurity in ungoverned areas reflects the complex interplay between federal, state, and local governance structures within a diverse and geographically extensive country. The Nigerian federal system, with its three tiers of government, creates multiple layers of authority and responsibility for security governance, but also generates coordination challenges and jurisdictional ambiguities that can contribute to governance gaps (Akinola, 2020). The Nigerian military's role in internal security operations has expanded significantly over the past two decades, reflecting the state's struggle to maintain effective civilian law enforcement in various parts of the country. Operations such as Exercise Crocodile Smile, Operation Lafiya Dole, and Operation Safe Haven represent attempts by the federal government to project state authority into areas where civilian governance has been compromised by various forms of insecurity (Nwangwu & Ononogbu, 2021). However, these military-led approaches have faced criticism for their heavy-handed tactics and limited success in addressing the underlying governance deficits that contribute to insecurity.

The role of technology and surveillance systems in Nigeria's security governance has evolved rapidly, particularly with the introduction of various digital platforms for crime reporting and community engagement. The Inspector General of Police's community policing initiative, launched in 2020, seeks to leverage technology to improve communication between communities and security agencies whilst building local capacity for crime prevention and conflict resolution (Nigeria Police Force, 2020). These initiatives represent important innovations in security governance, though their effectiveness in ungoverned areas remains limited by infrastructure constraints and digital literacy challenges.

As Nigeria's largest state by landmass, covering approximately 76,363 square kilometres, Niger State encompasses diverse geographical terrains including parts of the Guinea Savanna, extensive river systems, and remote rural areas that have historically experienced limited state presence (Abdullahi & Okwori, 2021). The state's vast territory, combined with its relatively sparse population distribution, creates significant challenges for effective governance and security provision. The state's economy is predominantly agricultural, with farming and cattle rearing serving as primary livelihood activities for the majority of the population. This agricultural focus has created specific governance challenges, particularly regarding land use conflicts between sedentary farmers and nomadic pastoralists. These conflicts have been exacerbated by climate change impacts, including desertification pressures from the north and changing rainfall patterns that have intensified competition for arable land and water resources (Ibrahim & Jennings, 2021).

Niger State's geographical location places it at the intersection of several major transportation routes, including roads connecting the northern and southern parts of Nigeria, as well as routes linking Nigeria with neighbouring Niger Republic. This strategic location has made the state vulnerable to various forms of transnational crime, including arms trafficking, drug smuggling, and human trafficking. The porous nature of the Nigeria-Niger border, combined with limited border control capacity, has facilitated the movement of armed groups and criminal networks between the two countries (Ogbonnaya, 2022). The state's governance structure reflects Nigeria's federal system, with 25 local government areas serving as the primary units of local administration. However, the capacity of these local government areas to provide effective governance varies significantly, with rural and remote areas often experiencing limited government presence and service delivery. This has created governance voids that have been filled by various actors, including traditional authorities, religious organisations, and in some cases, criminal networks.

Niger State's approach to governance in ungoverned areas represents a multifaceted strategy that combines formal government institutions with traditional governance systems and community-based initiatives. The state government has implemented various programmes aimed at extending state presence and improving service delivery in remote areas, recognising that effective governance requires more than just security provision. The Niger State Geographic Information System (NIGIS) represents one of the most innovative governance initiatives undertaken by the state government. Launched in 2018,

this comprehensive mapping and data collection project aims to create detailed geographical and demographic information about all areas of the state, including previously unmapped remote communities (Niger State Government, 2021). This initiative recognises that effective governance requires accurate information about population distribution, resource availability, and infrastructure needs. The project has involved extensive community engagement and has helped identify areas where government presence and services are most needed.

Traditional governance institutions continue to play crucial roles in Niger State's governance architecture, particularly in areas where formal government presence is limited. The state government has implemented various programmes to strengthen and integrate traditional authorities into formal governance structures. The Traditional Rulers Council serves as a formal mechanism for engaging traditional authorities in governance processes, whilst various local government areas have established traditional authority liaison programmes that recognise and support traditional governance functions (Yakubu, 2021).

The state's approach to community development has emphasised participatory governance mechanisms that seek to involve local communities in identifying priorities and implementing development projects. The Niger State Community and Social Development Project, supported by the World Bank, has implemented various community-driven development initiatives that aim to strengthen local governance capacity whilst addressing infrastructure and service delivery needs (World Bank, 2020). These initiatives have been particularly important in remote areas where top-down government programmes have historically been less effective.

Educational governance has received particular attention from the Niger State government, with various programmes aimed at improving access to education in remote and under-served areas. The state's nomadic education programme recognises the specific needs of pastoralist communities and has implemented mobile and flexible educational approaches that accommodate traditional livelihood patterns whilst providing formal education opportunities (Niger State Ministry of Education, 2021). These programmes represent important innovations in inclusive governance that recognise and accommodate cultural diversity.

The state government has also implemented various economic governance initiatives aimed at improving livelihoods and reducing the economic vulnerabilities that can contribute to insecurity. The Niger State Agricultural Development Programme has focused on improving agricultural productivity and market access for smallholder farmers, whilst various microfinance and small business support programmes have aimed to diversify economic opportunities in rural areas (Bello, 2022). These economic governance measures recognise that sustainable security requires addressing the underlying socio-economic conditions that can make communities vulnerable to criminal recruitment and activities.

The Impact of Insecurity in Ungoverned Spaces on Food Production and Access

The relationship between insecurity in ungoverned spaces and food systems has emerged as a critical area of concern for scholars, policymakers, and development practitioners globally. Ungoverned territories, characterised by weak state presence and limited institutional capacity, often experience heightened vulnerability to various forms of violence and criminality that directly disrupt agricultural activities and food distribution networks. This disruption creates cascading effects that extend beyond immediate geographical boundaries, affecting regional food markets and contributing to broader patterns of food insecurity. The examination of these dynamics requires understanding how insecurity manifests differently across various contexts and how local communities adapt their agricultural practices and food access strategies in response to persistent threats.

International scholarship has increasingly recognised the fundamental connections between security conditions and agricultural productivity in areas with limited state governance.

The global discourse on food security has evolved to acknowledge that traditional approaches focusing solely on agricultural technology and market access are insufficient when underlying security conditions prevent farmers from accessing their fields or maintaining productive activities (Clapham, 2020). The United Nations framework for understanding food security explicitly acknowledges the role of conflict and insecurity as primary drivers of hunger and malnutrition worldwide. The UN's State of Food Security and Nutrition in the World reports consistently demonstrate that conflict-affected areas experience disproportionately high levels of food insecurity, with ungoverned spaces being particularly vulnerable due to their limited capacity for emergency response and humanitarian access (United Nations Peacebuilding Commission, 2021).

The African continent experiences some of the most severe impacts of insecurity on food systems globally, with ungoverned spaces playing a particularly prominent role in these dynamics. The prevalence of weak state institutions across many African countries has created extensive territories where non-state actors, including criminal networks and armed groups, exercise significant influence over economic activities, including agriculture and food trade. Nigeria's food security challenges are intimately connected to the country's struggle with insecurity in various ungoverned and under-governed areas. The country's status as Africa's most populous nation, combined with its dependence on smallholder agriculture for both food production and rural livelihoods, makes food system disruptions particularly consequential for national stability and human development outcomes.

The expansion of insecurity across Nigeria's agricultural zones has had profound impacts on national food production patterns. Areas that have historically served as major food-producing regions, including parts of the Middle Belt and northern states, have experienced significant reductions in cultivated acreage due to farmer-herder conflicts, banditry, and other forms of violence (Akinola, 2020). These disruptions have contributed to increased food prices and reduced availability of staple foods in urban markets. Nigeria's National Food Security Programme has explicitly recognised the role of insecurity in undermining food production and access. The programme's strategy documents acknowledge that achieving food security requires addressing the underlying security challenges that prevent farmers from accessing their fields and participating in agricultural value chains. However, implementation of security-sensitive agricultural programming has faced significant challenges due to the volatile nature of security conditions and limited coordination between security agencies and agricultural development programmes (Office of the National Security Adviser, 2019).

The country's large pastoral population has been particularly affected by insecurity-related disruptions to food systems. Traditional transhumance patterns that have historically enabled pastoralists to access seasonal grazing areas and maintain livestock productivity have been increasingly disrupted by violence and the establishment of no-go areas in various parts of the country. This has led to increased competition for resources and contributed to the escalation of farmer-herder conflicts (Nwangwu & Ononogbu, 2021). Market systems that connect rural producers with urban consumers have also been significantly affected by insecurity in ungoverned areas. Transportation networks that traverse insecure areas face increased risks, leading to higher transportation costs and reduced market access for rural producers. These disruptions have contributed to increased food prices in urban areas whilst reducing income opportunities for rural households (Olaniyan, 2022).

Niger State's agricultural economy has been fundamentally shaped by its extensive territory, diverse agro-ecological zones, and the intersection of farming and pastoral livelihood systems. The state accounts for a significant portion of Nigeria's food production, particularly for staple crops such as rice, maize, yam, and millet, making its agricultural performance crucial for both local and national food security (Abdullahi & Okwori, 2021). The state's agricultural calendar has been increasingly disrupted by insecurity concerns that affect farmers' ability to conduct normal farming

activities. Planting and harvesting seasons, which require intensive labour and regular field visits, have become particularly vulnerable to security threats. Many farming communities have reported abandoning fields located in areas considered too dangerous to access, leading to significant reductions in cultivated acreage and food production (Umar, 2020).

Local food markets in Niger State have experienced significant disruptions due to insecurity concerns. Market days, which traditionally serve as crucial points for food distribution and income generation, have been affected by security threats. Some communities have reported reduced market attendance and decreased trade volumes, affecting both food availability and rural incomes. Transportation of agricultural products from rural production areas to urban markets has also been hampered by security concerns along major transportation routes (Niger State Government, 2021).

Direct Impacts on Food Production Systems

Labour availability for agricultural activities has been significantly affected by insecurity concerns. Agricultural activities in Niger State have traditionally relied on communal labour arrangements and seasonal labour migration, both of which have been disrupted by security threats. Community members are often reluctant to participate in group farming activities that require working in remote or potentially dangerous areas, leading to labour shortages during critical agricultural periods (Garba, 2022). The use of agricultural inputs, including improved seeds, fertilisers, and agricultural tools, has been constrained by insecurity-related disruptions to supply chains and farmers' reluctance to invest in inputs for fields they may not be able to access throughout the growing season. Extension services that provide technical support to farmers have also been limited by security concerns, reducing farmers' access to information about improved agricultural practices (Hassan, 2021). Livestock production has faced particular challenges due to the mobility requirements of pastoral systems and the high value of livestock as targets for theft. Cattle rustling and other forms of livestock theft have forced many herders to reduce their herd sizes or relocate to areas with better security conditions. The disruption of traditional grazing patterns has led to overgrazing in some areas and underutilisation of pasture resources in others, affecting overall livestock productivity (Ndagi, 2021).

Access to Market and Food Distribution

Food distribution networks in Niger State have experienced significant disruptions due to insecurity in ungoverned areas, affecting the movement of food from production areas to consumers. Transportation routes that connect rural farming communities with urban markets have become increasingly dangerous, leading to increased transportation costs and reduced frequency of food movements. These disruptions have created price volatility and reduced food availability in both rural and urban areas. Rural markets that serve as collection points for agricultural products and distribution centres for manufactured goods have faced security-related challenges that reduce their effectiveness in facilitating food trade. Market infrastructure has been damaged or destroyed in some areas affected by violence, whilst in other areas, reduced market attendance due to security concerns has diminished the economic viability of market operations (Mohammed, 2022).

Household and Community Food Security

Food security at the household level in Niger State has been significantly affected by insecurity through multiple pathways that influence both food availability and access. Households in insecure areas have experienced reduced food production from their own agricultural activities, forcing them to rely more heavily on market purchases at a time when their income from agricultural activities has also been reduced by security-related disruptions. Dietary diversity has been affected as households have been forced to rely more heavily on easily accessible and storable foods, often at the expense of fresh vegetables, fruits, and animal products that require more complex production and distribution systems. This shift towards less diverse diets has implications for nutrition

outcomes, particularly for vulnerable groups such as children and pregnant women who have higher nutritional requirements (Digital Nigeria, 2022). Traditional coping mechanisms that households have historically used to manage food insecurity have been undermined by insecurity conditions. Reciprocal support networks between households, seasonal migration for agricultural work, and gathering of wild foods have all been constrained by security concerns. This has reduced household resilience and increased vulnerability to food shortages during periods of production shortfalls or market disruptions (Community Development Quarterly, 2021).

Conceptual Linkages: A Feedback Loop

The conceptual framework underpinning this study views the relationship between ungoverned spaces and food security threat in Niger State as a cyclical feedback loop in which each element reinforces and exacerbates the others. In ungoverned spaces marked by weak or absent state authority, limited security presence, and poor governance, violent non-state actors thrive, leading to chronic insecurity. This insecurity, in turn, disrupts agricultural production, restricts access to markets, displaces farming populations, and erodes rural livelihoods, thereby aggravating food insecurity. As food insecurity deepens, it further weakens the social fabric and economic resilience of local communities, undermining their ability to resist violent groups or re-engage in productive farming. This creates a vicious cycle where insecurity leads to hunger, and hunger fuels further fragility and vulnerability, reinforcing the ungoverned status of affected areas. Moreover, state disengagement from these spaces not only leaves a governance vacuum but also prevents the implementation of effective agricultural, humanitarian, and development interventions that could break the cycle of poverty. In Niger State, where certain rural local government areas such as Shiroro, Munya, Rafi, and Mariga experience recurrent attacks and displacement, this feedback loop is particularly evident.

The erosion of formal authority in these areas intensifies the food crisis, which in turn creates conditions that allow insecurity and ungoverned dynamics to persist. Therefore, understanding the linkages between ungoverned spaces and food security threats is crucial for developing comprehensive solutions that integrate security, governance, and rural development strategies. This framework serves as the analytical backbone of the study, emphasising the need for interventions that simultaneously address insecurity, reestablish state presence, and restore food systems as mutually reinforcing goals.

Theoretical Framework

This study draws on two major theoretical foundations: Fragile State Theory and Human Security Theory.

Fragile State Theory

Fragile State Theory is a critical framework in political science and development studies that emerged prominently in the post-Cold War era, particularly after the interventions in Somalia, Afghanistan, and the Balkans in the 1990s. The term "fragile state" began to feature widely in international development discourse after the World Bank's 2002 report on "Low-Income Countries under Stress" and gained further prominence with the 2005 Paris Declaration on Aid Effectiveness. However, its theoretical grounding is traceable to classical state theory, particularly Max Weber's (1919) definition of the state as the entity that holds the monopoly of the legitimate use of force within a given territory. When a state loses this monopoly either due to internal conflict, corruption, weak institutions, or external pressures, it is considered fragile or failing (Weber, 1919; Rotberg, 2004).

Robert I. Rotberg (2004), a leading proponent of Fragile State Theory, posits that fragile states are those whose institutions are unable to provide basic services, such as security, justice, infrastructure, and welfare. According to Rotberg, the most critical function of the state is the delivery of political goods, and its failure to do so marks the transition from fragility to failure. He further notes that such states are characterised by a lack of control over their territory, widespread violence, and a disconnection

between the state and its citizens. The Fragile States Index (FSI), developed annually by the Fund for Peace since 2005, utilises indicators such as demographic pressures, refugee flows, human rights violations, and the strength of the security apparatus to measure state fragility globally (Fund for Peace, 2023).

In Nigeria, particularly in the rural areas of Niger State, the Fragile State Theory offers a valuable lens for understanding how state weakness contributes to the emergence of ungoverned spaces and persistent food insecurity. The Nigerian state exhibits many characteristics of fragility, particularly in peripheral regions where the authority of the central government is weak, and parallel power structures, such as bandit groups or local militias, often fill the governance vacuum (Akinyele, 2021). The prevalence of armed attacks, kidnappings, and displacement in areas like Rafi, Mashegu, Mariga, and Shiroro local government areas indicates a breakdown in the state's ability to guarantee security, enforce the rule of law, and ensure economic stability (Nigeria Security Tracker, 2023). According to empirical findings by the International Crisis Group (2021), over 500 communities in Niger State's northwestern axis have experienced repeated attacks by non-state armed groups between 2020 and 2023. These incidents destroyed farmland, caused widespread displacement, and resulted in a significant decline in agricultural output. The state's inability to secure these areas and protect its citizens exemplifies core elements of Rotberg's fragile state paradigm, namely, the erosion of authority, legitimacy, and capacity.

Furthermore, the Humanitarian Needs Overview by the UN Office for the Coordination of Humanitarian Affairs (OCHA, 2023) notes that over 120,000 people in Niger State require food assistance due to insecurity and displacement. These figures reinforce the central thesis of Fragile State Theory: when state institutions collapse or malfunction, the consequences are felt most acutely in basic human needs such as food, shelter, and health. In contexts where the state is unable to regulate violence, collect taxes, or provide public goods, citizens often resort to informal systems of protection and survival, which can further undermine state legitimacy (Call, 2008). In such settings, alternative governance mechanisms such as agro-security cooperatives emerge as coping strategies. These local responses, while commendable, highlight the very weaknesses that the state they aim to replace has. Studies by Akinyemi and Okuneye (2023) demonstrate that in communities without police presence or military protection, cooperatives often assume protective functions, such as organising patrols, arranging safe market access, and facilitating conflict mediation. While these actions demonstrate resilience, they are not substitutes for formal state functions and highlight the increasing irrelevance of state institutions in fragile environments.

Another key insight of Fragile State Theory relevant to this research is the concept of spatial fragility, i.e., the uneven reach of state authority across its territory. Clapham (2002) argues that fragile states are not necessarily weak across the board but exhibit spatial and functional gaps. In Nigeria's Niger State, state presence is more visible in urban centres like Minna and Bida. However, it is virtually absent in remote farming communities near the borders with Zamfara and Kebbi states, which have become hotspots for banditry. This unevenness in governance results in de facto ungoverned spaces where criminal groups operate freely and agricultural activity is paralysed (Adesoji, 2021).

Fragile State Theory is also particularly useful for explaining the cyclical relationship between insecurity and food insecurity. In fragile settings, weak institutions fail to mediate resource conflicts, respond to climate shocks, or provide early warning for food crises. As a result, rural farmers face a triple burden: the threat of violent attacks, loss of livelihood, and lack of state support. This interconnection between institutional fragility and livelihood vulnerability is well-documented in the work of Brinkerhoff (2011), who argues that without functional state capacity, efforts to achieve food security or development are unlikely to succeed.

Moreover, fragility in Niger State is compounded by low trust in government institutions. Surveys conducted by the Niger State Peacebuilding Agency (2023) reveal that over 70% of respondents in conflict-affected LGAs believe that the government has abandoned their communities. This perception further delegitimises the state and legitimises informal actors, deepening the fragility loop. As Paris (2010) notes, state legitimacy is as important as capacity; when people no longer trust or expect protection from the state, the social contract collapses.

In summary, Fragile State Theory offers a robust conceptual and analytical foundation for understanding the dynamics of ungoverned spaces and food insecurity in Niger State. It highlights the state's inability to perform core functions, the emergence of parallel structures, and the erosion of legitimacy, all of which are evident in the study area. The theory explains not only why insecurity persists but also why it has such devastating effects on agriculture and rural livelihoods. It reveals how the state's failure to monopolise violence, provide security, and ensure equitable development creates fertile ground for disorder, displacement, and hunger. Thus, the application of Fragile State Theory in this study is essential for uncovering the structural and institutional roots of the crises affecting Niger State's rural communities.

Application and Relevance of the Fragile State Theory to the Study

The Fragile State Theory offers crucial insights into the systemic governance breakdowns that give rise to ungoverned spaces. A fragile state is characterised by its inability to provide basic public goods, maintain territorial control, or guarantee the security and welfare of its citizens (Rotberg, 2004; OECD, 2016). Within this context, the government's weakness creates power vacuums, where non-state actors, including armed groups, bandits, and informal security networks, assert control. These vacuums not only foster insecurity but also disrupt economic activities, particularly agriculture, which heavily depends on rural livelihoods. In the case of Niger State, indicators of fragility such as poor infrastructure, weak policing capacity, political exclusion, and inconsistent service delivery have allowed armed banditry and communal violence to flourish (Cilliers & Sisk, 2013; Raleigh & Dowd, 2013). Fragile State Theory thus provides a valuable scaffold for understanding why certain rural areas become increasingly inaccessible and why communities are left vulnerable to violent predation. This theoretical lens highlights that food insecurity is not merely an economic problem but a political and security problem rooted in deeper governance failures.

Moreover, Fragile State Theory draws attention to the spatial unevenness of state presence. While urban centres may experience relative stability, remote rural areas often experience acute governance deficits. This unevenness exacerbates rural food insecurity, as farmers are forced to abandon fields, markets become inaccessible, and humanitarian aid faces operational challenges.

Human Security Theory

Human Security Theory emerged in the 1990s as a transformative framework that shifted the focus of security discourse from state-centric paradigms to the well-being of individuals. Traditionally, security studies have been dominated by the realist approach, which emphasises the protection of territorial borders and state sovereignty from military threats (Buzan, 1991). However, the end of the Cold War and the increasing frequency of intrastate conflicts, humanitarian crises, and non-military threats such as poverty, disease, and environmental degradation called for a more comprehensive understanding of security. The concept of human security gained formal prominence with the publication of the 1994 United Nations Development Programme (UNDP) Human Development Report, which defined human security as "freedom from fear and freedom from want" (UNDP, 1994). The 1994 UNDP report identified seven key dimensions of human security: economic, food, health, environmental, personal, community, and political security. These dimensions reflect a multidimensional approach to security that emphasises protecting individuals and communities from both chronic threats (like hunger and disease) and sudden disruptions (such as conflict or natural disasters). The report argued that security should not be measured solely by the absence of armed conflict, but by the presence of conditions that allow individuals to live with dignity and fulfil their potential (UNDP, 1994). The theoretical foundations of Human Security

were further developed by scholars such as Tadashi Yamamoto, Amartya Sen, and Sabina Alkire. Sen (2000) emphasised that human security is people-centred and closely linked to the expansion of individual capabilities and freedoms. Alkire (2003) reinforced this position by proposing frameworks for operationalising human security based on the identification of "vital core" threats to human lives. The Commission on Human Security (2003), co-chaired by Ogata and Sen, framed human security as the protection of the "vital core of all human lives in ways that enhance human freedoms and human fulfilment" (Ogata & Sen, 2003).

In the context of rural Nigeria, specifically Niger State, the Human Security Theory offers a valuable analytical framework for understanding the interconnected nature of insecurity, ungoverned spaces, and food insecurity. The theory's emphasis on food security, personal security, and community security is particularly pertinent. In regions such as Shiroro, Rafi, Mariga, and Mashegu, communities face persistent threats from armed banditry, herder-farmer violence, and kidnapping, which undermine their access to food, livelihoods, and physical safety (International Crisis Group, 2021; Nigeria Security Tracker, 2023). These threats are compounded by state inaction, weak governance, and poor infrastructure, resulting in a multidimensional security crisis that aligns with the human security paradigm (Adesoji, 2021). Applying Human Security Theory to this study enables an in-depth analysis of how insecurity not only disrupts agricultural production but also infringes upon individuals' rights to food, shelter, and freedom from fear. For instance, empirical data from the Nigeria Security Tracker (NST, 2023) and reports from local NGOs document over 200 violent incidents in rural Niger State between 2022 and 2023, with frequent attacks during farming seasons leading to displacement, loss of livestock, and abandonment of farmlands (Niger State Peacebuilding Agency, 2023). Moreover, Human Security Theory helps explain why local, adaptive responses, such as agro-security cooperatives, have emerged. These cooperatives function not merely as economic alliances but as grassroots mechanisms to restore a sense of safety, food access, and social cohesion in the absence of formal state protection (UNDP, 2022; Akinyemi & Okuneye, 2023). From a human security perspective, their existence signifies both the resilience of affected communities and the systemic failure of the state to fulfil its security responsibilities. The theory also highlights the disproportionate impact of insecurity on vulnerable groups, particularly women, children, and the elderly. In Niger State, women farmers are especially affected, as insecurity restricts their mobility and access to markets, while children face food shortages that affect their health and educational attainment (Grobler, 2021; Human Rights Watch, 2020). Human Security Theory thus provides a gender-sensitive and people-centred lens through which these intersecting vulnerabilities can be analysed and addressed.

Another strength of the theory is its preventive and developmental orientation. Rather than treating insecurity as a purely military or policing issue, Human Security Theory encourages long-term solutions rooted in social justice, inclusive governance, and human development. For policy-making, this implies that improving food security in Niger State requires not only military interventions but also investment in rural infrastructure, inclusive agricultural policies, psychosocial support, and community-led peacebuilding (Omotola & Aremu, 2022).

Application and Relevance of the Human Security Theory

Complementing Fragile State Theory, the Human Security Paradigm shifts focus to the experiences and needs of individuals and communities living amidst insecurity. Introduced in the 1994 United Nations Development Programme (UNDP) Human Development Report, the Human Security framework expands beyond traditional state-centred notions of security to emphasise protection from chronic threats, such as hunger, disease, and repression, as well as protection from sudden and hurtful disruptions in daily life (UNDP, 1994). Applying the Human Security approach allows this study to capture the micro-level impacts of ungoverned spaces and food insecurity. It recognises

that the collapse of agricultural production is not simply an economic loss but a direct assault on the physical survival, health, and dignity of individuals. It also foregrounds the agency of communities in developing resilience strategies, such as forming agro-security cooperatives, adopting adaptive farming techniques, and engaging in informal conflict resolution mechanisms.

By adopting Human Security as a framework, the study acknowledges that food insecurity in Niger State is multidimensional, encompassing physical insecurity, economic insecurity, and social insecurity, all of which are intertwined. Thus, policy responses must equally be multi-dimensional, addressing not only agricultural productivity but also protection needs, mobility rights, and access to social safety nets.

Empirical Studies

Amnesty International (2021), through primary testimonies and field visits, provides detailed accounts from Niger and Zamfara States where farmers report being systematically extorted by armed groups. In one widely reported instance from 2021, villagers in Mariga LGA were forced to pay a per-hectare tax to local bandits to harvest their crops—those who could not pay faced arson, abduction, or forced displacement. Akinyemi and Okuneye (2023) used a mixed-methods approach that included surveys and key informant interviews, finding that over 60% of respondents in North Central Nigeria had either paid or witnessed agricultural extortion within the past year.

Their study underscores the psychological and economic toll these practices take, deterring agricultural participation and depleting household assets. Human Rights Watch (2020) documented a disturbing trend of displaced farming communities in Northern Nigeria, noting that many households in Niger State were forced to abandon their primary source of livelihood due to repeated attacks and insecurity. The report notes that several LGAs in the state, including Rafi and Kontagora, have experienced multiple waves of violence since 2019, with armed groups targeting farmers during planting and harvesting seasons to maximise disruption. This cyclical displacement has resulted in long-term food insecurity and dependence on humanitarian assistance, with particular vulnerability observed among women-headed households and children.

Benjaminsen and Ba (2019), examining post-2012 Mali, found that the collapse of state presence in the north led to the rise of informal security groups and local governance structures. These included ethnic-based self-defence militias and village security committees that, although sometimes violent, enabled limited farming and resource access to continue. Similarly, Burkina Faso witnessed the emergence of the "Volunteers for the Defence of the Homeland" (VDP) in 2015, which were community-driven but state-sanctioned groups aimed at countering armed threats and allowing rural economies to function under siege (ICG, 2020). In Niger Republic, Turner (2016) highlighted the development of informal mediation networks between farmers and herders, especially in zones of persistent insecurity. These networks helped reduce conflict over grazing and land use, maintaining some agricultural productivity despite widespread violence.

The Organisation for Economic Cooperation and Development (OECD, 2016) also documented how communities across the Sahel adopted small, dispersed farming plots, adapted informal food trade routes, and engaged in rotational cropping practices as a strategy to mitigate the risks associated with insurgent activities and mobility restrictions. These adaptive strategies parallel developments in Niger State, where insecurity has fragmented farming patterns and restricted access to markets. Crucially, these empirical cases reveal that frequent and sustained attacks on rural communities whether in the Sahel or Niger State serve as the primary catalyst for the emergence of localised, hybrid governance and food security mechanisms.

A study by Mukhtar (2019) assessed food insecurity and coping strategies among rural households in Niger State, employing a food insecurity index and universal coping strategy index. The findings revealed that 48% of rural households were food insecure, with a per capita household consumption of 2,243 kcal, compared to a

requirement of 2,474 kcal. Households adopted various coping strategies, including consuming less preferred foods, reducing meal portions, and skipping meals. Further analysis by Mukhtar (2019) identified key determinants influencing food security status among farming households in Niger State. Using a food security index and binary regression analysis on data from 140 farming households, the study found that 59% of the households were food-secure, while 41% were food-insecure. Significant factors affecting food security included household income, family size, education level, monthly expenditure, age of household head, livestock ownership, farm size, and access to extension services. The prevalence of insecurity in Niger State has had a direct impact on agricultural activities. In May 2024, armed groups attacked the Kuchi community in Munya Local Government Area, resulting in 10 deaths and the kidnapping of at least 160 individuals. The assailants also looted livestock and food supplies, leading to the displacement of approximately 700 villagers.

A study by Ujah et al. (2023) utilising data from the 2021 Nigerian Multiple Indicator Cluster Survey found that nearly 75% of pregnant women in Nigeria experienced moderate to severe food insecurity. Factors associated with this included higher parity, larger household size, lower household wealth, and community-level poverty. Additionally, a report by the Nigerian government and international development partners in August 2024 indicated that over 31.8 million Nigerians were acutely food insecure, a significant increase from previous assessments. The surge was attributed to ongoing insecurity and the removal of fuel subsidies, which led to higher transportation costs and food prices. The interplay between persistent insecurity and food insecurity in Niger State has led to the emergence of agro-security cooperatives as vital community responses to these challenges. These cooperatives not only aim to protect agricultural activities but also serve as mechanisms for community resilience in the face of governance challenges. Integrating these indigenous systems into broader peacebuilding and food security frameworks is essential for sustainable development in Nigeria's fragile regions. Empirical studies suggest that agro-security cooperatives have had a modest but meaningful impact on agricultural productivity in conflict-affected areas, including parts of Niger State.

A study conducted by the United Nations Development Programme (UNDP, 2022) using field surveys and interviews in Kaduna and Niger States found that farmers who were members of agro-security cooperatives experienced a 25–30% increase in farm attendance rates during periods of insecurity compared to non-members. The study indicated that such cooperatives provided a basic layer of protection, emboldening farmers to plant crops and expand cultivation areas that had previously been abandoned due to fear of attack.

Research by Akinyemi and Okuneye (2023) revealed a unique role of agro-security cooperatives in reducing 'loss aversion behaviour'. Their mixed-methods research, which combined interviews and agricultural yield data, showed that cooperative involvement led to a significant shift in farmers' decisions. Previously, farmers had vacated high-yield but exposed farmlands due to repeated attacks. However, under the protective umbrella of cooperative-led patrols and community-based security arrangements, they cautiously began to return. The resilience fostered by these cooperatives is particularly significant in regions of Niger State such as Shiroro, Mariga, Rafi, and Mashegu, where formal security presence is limited and banditry has escalated. Grobler (2021), drawing from case studies in these areas, found that the frequency of attacks on farming communities, especially during peak planting and harvesting periods, compelled villagers to form agro-security networks out of necessity. His qualitative research emphasised that these networks were not only security-driven but also functioned as platforms for agricultural collaboration, including rotational farming and group harvesting. Reports by the International Crisis Group (ICG, 2021) corroborated these findings, highlighting that in some districts of Katsina and Niger States, mobile patrol teams equipped with motorcycles and walkie-talkies significantly reduced the incidence of farm raids. These observations underscore the importance of grassroots security responses as essential survival

tools for communities navigating complex and often ungoverned conditions.

Identified Gaps in the Literature

Based on the above observations, the following specific gaps emerge from the reviewed literature:

A. Sub-National Focus

There is a glaring gap in localised studies in Niger State. Most current research generalises findings across vast geographic regions, ignoring local variations in the intensity of insecurity, governance collapse, and food system disruption.

B. Integration of Governance and Food Security

Few studies holistically integrate governance failure and food system collapse. Many studies focus either on security (banditry, terrorism) or food insecurity independently, without exploring their mutual causality.

C. Documentation of Local Adaptation Strategies

While some references to local coping mechanisms exist, a comprehensive and systematic analysis of community-led resilience strategies, such as agro-security cooperatives, remains missing. Understanding how communities organise informal security, cooperative farming, or other adaptive strategies could provide invaluable policy lessons.

D. Policy-Relevant Data

There is a shortage of localised, actionable data that can directly inform policy interventions at the state or local level. Most recommendations are broad and national in scope, missing the opportunity for tailored solutions based on localised research. The reviewed literature offers substantial conceptual, theoretical, and empirical foundations for studying the relationship between ungoverned spaces and food insecurity. However, it is also clear that significant gaps remain, particularly in localised empirical research, integration of governance and food security dynamics, and documentation of grassroots resilience mechanisms. A localised, primary data-driven study focusing on Niger State is crucial for understanding the specific dynamics of insecurity, food insecurity, and the implications of ungoverned spaces in the region.

Research Design

The study adopted a descriptive survey design within a mixed-methods framework, which is well suited for obtaining and presenting a comprehensive picture of the nature, characteristics, and implications of ungoverned spaces and their impact on food insecurity in Niger State. A descriptive survey enables structured data collection from a representative sample, offering both breadth and depth in understanding community perceptions, experiences, and coping strategies in the face of insecurity and weakened governance. This mixed-methods design incorporated both mixed-method design, combining quantitative and qualitative approaches to provide a comprehensive understanding of the impact of ungoverned spaces on food insecurity in Niger State. The descriptive survey method formed the backbone of the quantitative component, utilising structured questionnaires administered to a representative sample. This was complemented by Key Informant Interviews (KIIs), which offered deeper contextual insights into local governance structures, food insecurity challenges, and community coping mechanisms. The mixed-method approach allows for triangulation, enriching the analysis and ensuring both breadth and depth of data.quantitative and qualitative approaches to enrich the analysis.

The Study Area

Niger State is located in the North-Central region of Nigeria and is the largest state in the country by land area, covering approximately 76,363 square kilometers (City Population, 2022). It lies between latitudes 8° and 11° North and longitudes 4° and 7° East, positioning it centrally within Nigeria's national borders. The state's capital is Minna, situated in the central part of the state. The state comprises 25 Local Government Areas (LGAs), some of which includes Shiroro, Munya, Minna, Bida, Kontagora, and

Suleja. These LGAs serve as administrative units, each with unique socio-economic characteristics influenced by local geography and access to resources. As of the 2023 National Population and Housing Census, Niger State has an estimated population of 6,783,300 people (National Population Commission, 2023). This population is distributed across its 25 local government areas (LGAs), with varying densities and demographic profiles. The state's population is ethnically diverse, including communities such as the Nupe, Gbagyi, Hausa, Kamuku, and Fulani, among others (Wikipedia, 2020)

Niger State's topography is diverse, ranging from the lowland plains in the south to the hilly terrains in the north. The climate is predominantly tropical, characterised by distinct wet and dry seasons. The state's agricultural activities are influenced by this climate, with the rainy season supporting the cultivation of crops such as millet, sorghum, maze, and yams. The state is endowed with significant natural resources, including fertile agricultural land and water bodies such as the Niger and Kaduna Rivers. It also hosts the Kainji Lake National Park, Nigeria's largest national park, which encompasses the Kainji Lake, the Borgu Game Reserve, and the Zugurma Game Reserve. These areas are crucial for biodiversity conservation and support various ecological zones within the state (Wikipedia, 2020). Niger State shares borders with several other Nigerian states and the Republic of Niger. To the north, it borders Kebbi and Zamfara States; to the south, it is adjacent to Kogi and Kwara States; to the east, it borders Kaduna State and the Federal Capital Territory; and to the west, it shares an international boundary with the Republic of Niger (Wikipedia, 2020). Despite its agricultural potential, Niger State faces challenges related to insecurity, particularly in its rural areas. These security concerns have implications for food production and distribution, affecting the livelihoods of local communities. Understanding the state's geographical and socio-economic context is essential for addressing these challenges and formulating effective interventions.

Population of the Study

The population for this study was limited to the residents of Shiroro and Munya Local Government Areas (LGAs) of Niger State, Nigeria. These areas were selected due to their heightened exposure to insecurity, ungoverned spaces, and recurring food crises. According to the 2006 National Population Census, Shiroro LGA had an estimated population of 235,665, while Munya LGA had an estimated population of 103,651 (National Population Commission [NPC], 2006). To determine the current population in 2025, the study applied an average annual population growth rate of 3.4%, as recommended for population projection in Nigeria. The projected population is estimated using the exponential growth formula:

$P = P_0 (1 + r)^t$

Where:

- P = projected population

- P_0 = initial population (235,404)

- r = annual growth rate (0.034)

- t = number of years (2025 - 2006 = 19)

Applying this:

Shiroro LGA:

$P = 236,665 \times (1 + 0.034)^{19} \approx 235,665 \times 1.899 \approx 447,514$

Munya LGA:

$P = 103,651 \times (1 + 0.034)^{19} \approx 103,651 \times 1.899 \approx 196,777$

Thus, the total projected population of the study area in 2025 is:

$447,514 + 196,777 = 644,291$

This projected population serves as the basis for determining the study's sample size and distribution. The study draws on this population frame to ensure that the data collected is representative of communities most affected by insecurity and food insecurity

within Niger State. Given its strategic relevance, the population for the study includes:

1. Farmers (agricultural households affected by displacement and restricted access to farmland)
2. Traditional and religious leaders (key influencers and mediators in the community)
3. Local government officials (in agriculture, security, and development sectors)
4. Market traders and food vendors (whose livelihoods are disrupted by insecurity)
5. Women and vulnerable groups (including youth, the elderly, and persons with disabilities)
6. Security personnel and vigilante members (providing localised security services)
7. NGO and humanitarian organisation representatives (engaged in relief and resilience efforts)

The decision to focus on Shiroro and Munya Local Government Areas is informed by both theoretical and practical considerations. These areas are among the most affected by insecurity and ungoverned conditions in Niger State, making them highly relevant to the research problem. Additionally, they offer diverse insights into how food insecurity manifests in conflict-prone rural settings. Practical considerations such as accessibility, the feasibility of reaching respondents, and the potential for gathering representative data also influenced their selection for this study.

Sample Size Determination

To determine a manageable and statistically valid sample size from the total population of 644,291, the study employs the Taro Yamane (1967) formula:

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

Where:

- n = sample size

- N = population size (644,291)

- e = margin of error (0.05 for 95% confidence level)

Calculation:

$n = 644,291/ (1 + 644,291 \times 0.0025) \approx 644,291/ 1,611.73 \approx 399.47$

Therefore, the determined sample size was approximately 400 respondents.

To ensure representativeness across both LGAs, the sample was proportionally allocated based on their respective populations:

Shiroro (447,514/644291) =0.6947)

$0.6947 \times 400 = 278$ respondents.

Munya (196,777 / 644,291 = 0.3053)

$0.3053 \times 400 = 122$ respondents.

Thus, the final sample allocation will be:

Shiroro LGA: 278 respondents

Munya LGA: 122 respondents

Total sample size now amount to 400

This proportionate distribution enhances the accuracy and generalizability of the findings by reflecting the population weight of each LGA in the study.

Sampling Technique

The study employed a stratified sampling technique for the quantitative component to ensure that different categories of respondents are adequately represented. The target population was divided into homogeneous subgroups (strata) based on stakeholder categories, including farmers, community leaders, local officials, traders, women and vulnerable groups, security personnel, and representatives of non-governmental organisations (NGOs). Respondents were proportionally selected from each stratum based

on their relative size and significance within the affected communities. This approach ensured representativeness, reduce sampling bias, and enhance the generalizability of the study's findings.

For the qualitative component, purposive sampling was employed to select 10 key informants from both Shiroro and Munya LGAs. These key informants included traditional rulers, district heads, market women leaders, and local farmers' association leaders, selected based on their knowledge of security dynamics and their role in local food systems. The KIIs provided nuanced insights that may not be captured through the survey alone.

Instrument for Data Collection

This study utilised a mixed-method data collection strategy, incorporating both structured questionnaires and Key Informant Interviews (KIIs) to comprehensively investigate the impact of ungoverned spaces on food insecurity in Niger State.

Quantitative Instrument – Structured Questionnaire

Primary quantitative data for this study were collected through a structured questionnaire designed to assess the prevalence and characteristics of ungoverned spaces, the level of food insecurity, and the coping mechanisms employed by affected communities. This instrument allowed for systematic data gathering from a large sample and enable statistical analysis of the relationships between insecurity, governance, and food access. The questionnaire was administered by the researcher and trained research assistants, fluent in both Hausa and English, to facilitate comprehension and ensure inclusivity, especially among respondents with limited literacy. Ethical considerations such as informed consent, anonymity, and the voluntary nature of participation will be strictly adhered to during administration.

The questionnaire was divided into six major sections, as follows:

1. **Section A: Demographic Information** – This section collected background data on respondents, including age, gender, marital status, occupation, educational attainment, household size, and place of residence. These variables supported disaggregated analysis across socio-economic categories.

2. **Section B: Indicators of Ungoverned Spaces** – Items in this section explored respondents' perceptions of the absence or weakness of government presence, the operation of non-state actors, the state of infrastructure, and exclusion from public services. This section aims to identify the defining characteristics of ungoverned spaces within the study areas.

3. **Section C: Governance and Surveillance Interventions** – This section assessed the visibility, effectiveness, and community perception of existing government and non-governmental security or development interventions, including patrols, local governance engagement, and agricultural support programmes.

4. **Section D: Impact of Insecurity on Food Production and Access** – This section evaluated the extent to which insecurity has disrupted farming activities, limited market access, led to displacement, and driven up food prices in the affected areas.

5. **Section E: Current Levels of Food Insecurity** – Based on adapted items from the Food Insecurity Experience Scale (FIES), this section captured the frequency and severity of food insecurity experienced by households, including reduced food intake, meal skipping, reliance on external assistance, and dietary quality.

6. **Section F: Coping Mechanisms and Community Resilience** – This section explored local adaptive

responses, such as changes in farming practices, formation of agro-security cooperatives, informal security arrangements, communal food-sharing practices, and religious or traditional support systems.

The questionnaire primarily consisted of closed-ended questions and 5-point Likert scale items (ranging from Strongly Agree to Strongly Disagree), designed to allow for quantitative analysis and comparison across respondents. In addition, a few multiple-choice and open-ended questions were included to allow respondents to provide context or elaborate on specific responses. This instrument has been carefully designed to align with the study's objectives and research questions and served as the primary tool for collecting measurable data on the intersection between insecurity, governance, and food access in Shiroro and Munya Local Government Areas.

Qualitative Instrument – Key Informant Interview (KII) Guide

To supplement quantitative findings and provide deeper contextual understanding, the study utilised a Key Informant Interview (KII) Guide as the primary qualitative instrument. The guide is structured around 23 open-ended questions, carefully crafted to explore themes central to the research, including:

1. The characteristics and manifestations of ungoverned spaces in local communities.
2. The direct and indirect effects of insecurity on agriculture and household food access.
3. Community coping strategies and resilience mechanisms in response to insecurity and food challenges.
4. Perceptions of state interventions, governance structures, and suggestions for improved local security and livelihoods.

The KII guide consisted of 23 open-ended, thematic questions, structured around four key areas of inquiry:

1. The nature and characteristics of ungoverned spaces in the respondent's locality, including patterns of state absence and the presence of non-state actors.
2. The impact of insecurity on agriculture and food access, with a focus on displacement, land abandonment, and disruption of food systems.
3. Community coping mechanisms and local resilience strategies, such as informal security networks, cooperative arrangements, or changes in agricultural practices.
4. Perceptions of governance and security interventions, including the role of local leaders, state authorities, NGOs, and prospects for reclaiming ungoverned spaces.

The interviews were semi-structured to allow both consistency and flexibility. They were conducted face-to-face, in either English or Hausa, depending on the preference and literacy level of the respondent. Informed consent was obtained before the interviews, and responses were audio-recorded where permitted, then transcribed and coded for thematic analysis.

Justification: The inclusion of KIIs strengthened the research by providing depth, nuance, and contextual understanding that complements the statistical findings from the questionnaire. While quantitative data allows for broad generalisation and hypothesis testing, the qualitative insights from key stakeholders enable the study to explore the lived experiences, perceptions, and coping strategies of communities within ungoverned and conflict-affected spaces. This mixed-method approach thus enhances the credibility, reliability, and policy relevance of the study's findings.

Validity of the Instrument

The validity of the research instruments both the structured questionnaire and the key informant interview (KII) guide was

rigorously established to ensure that the data collected effectively addresses the study's objectives.

Procedure for Data Collection

The data collection process involved both quantitative and qualitative methods to obtain a comprehensive understanding of the research problem. The following steps were taken:

I. Recruitment and Training of Research Assistants

A total of six research assistants, proficient in Hausa and English, were recruited. They undergone intensive training on the study's objectives, ethical research conduct, the structure and content of the questionnaire and interview guide, and safety protocols. Emphasis were placed on cultural sensitivity, confidentiality, and non-coercive interviewing techniques, especially when interacting with vulnerable or displaced populations.

II. Fieldwork and Administration of Questionnaires

Quantitative data were collected using structured questionnaires administered face-to-face. Fieldwork was conducted over a two-week period in the selected communities of Shiroro and Munya Local Government Areas. Due to the insecurity in the study areas, the timing and movement of data collectors were carefully coordinated with local authorities, traditional rulers, and security agencies. For respondents with low literacy levels, research assistants read the questions aloud in Hausa, ensuring that all participants can fully understand and respond to the questionnaire. Completed forms were checked daily for completeness and accuracy before being safely stored and transferred for digital entry.

III. Conduct of Key Informant Interviews (KIIs)

In addition to the administration of questionnaires, the study incorporated ten (10) Key Informant Interviews (KIIs) to complement the quantitative data and provide deeper qualitative insights into the nature and effects of ungoverned spaces on food insecurity in Shiroro and Munya Local Government Areas of Niger State. These KIIs targeted individuals strategically selected based on their roles, experiences, and relevance to the research problem. The categories of informants include:

1. Traditional rulers
2. District heads
3. Farmers' association leaders
4. Market women leaders
5. Security personnel (from the Nigeria Police Force and local vigilante network)
6. Local government officials

The KIIs adopted a semi-structured format, guided by a set of twenty-three (23) open-ended thematic questions. These questions covered the following key areas:

1. The characteristics and indicators of ungoverned spaces within the respondents' communities
2. The effects of insecurity on food production, access, and livelihood sustainability
3. Community perceptions of government presence and surveillance mechanisms
4. Local coping strategies, resilience practices, and informal security arrangements
5. Suggestions for improving governance, food access, and overall human security in affected areas.

Interviews were conducted in either Hausa or English, depending on the respondent's preference and language proficiency. Each interview was audio-recorded with informed consent, and the recordings were transcribed verbatim for qualitative analysis. A thematic analysis approach was adopted to identify recurring patterns, local insights, and narrative data that support or challenge the findings from the survey. Incorporating KIIs enhanced the validity, reliability, and depth of the study by capturing the lived experiences, perspectives, and institutional challenges that are often overlooked by quantitative methods alone.

Method of Data Analysis

The study will employ a mixed-method analytical framework to process and interpret the collected data.

I. Quantitative Data Analysis

Quantitative data obtained through the questionnaire were entered into Statistical Package for the Social Sciences (SPSS) Version 26). The following analytical techniques were applied:

Descriptive Statistics: Including frequency counts and percentages to summarise demographic characteristics, perceptions of insecurity, food availability, and coping strategies.

Inferential Statistics: Techniques such as the Spearman's Rank Correlation analysis was used to examine relationships between key variables, such as the presence of ungoverned spaces, food insecurity outcomes, and the effectiveness of community coping mechanisms.

Hypothesis Testing: Each of the stated hypotheses were statistically tested to determine whether observed relationships are significant at an accepted level of probability (typically $p < 0.001$).

Hypotheses 1, 3 4 and 5 were tested using Spearman's Rank Correlation because the hypotheses analyzed the relationship between various variables directionally without prediction while hypothesis 2 was tested using Mann-Whitney U Test because the hypothesis compared group differences with the dependent variable that was ordinal.

II. Qualitative Data Analysis

The qualitative data collected through Key Informant Interviews (KIIs) were analysed using thematic content analysis, a systematic approach suited for exploring patterns and meanings within qualitative responses. This analytical process included the following steps:

a) Transcription of Interview Recordings: All interviews were transcribed verbatim to ensure that responses are captured accurately, preserving both content and context.

b) Coding of Transcripts: Transcripts were manually or digitally coded by grouping similar responses into meaningful units. Codes will be developed inductively (from the data itself) and deductively (informed by the study objectives and theoretical framework).

c) Identification of Emerging Themes: Coded data were categorised into major themes such as:

I. Characteristics of ungoverned spaces

II. Security threats and actor dynamics

III. Effects of insecurity on food access and production

IV. Community coping mechanisms and resilience strategies

V. Governance and intervention gaps

d) Interpretation and Integration: The thematic findings were interpreted in relation to the research questions, objectives, and theoretical frameworks (Fragile State Theory and Human Security Theory). Quotes from participants were used to illustrate key themes and support the quantitative findings. The integration of qualitative and quantitative methods allowed for methodological triangulation, increasing the credibility and depth of the study. This provided a more comprehensive understanding of how ungoverned spaces and insecurity affect food systems and community livelihoods in Niger State. The qualitative insights also helped explain the "why" and "how" behind observed patterns, thereby enhancing the study's policy relevance and practical implications

DATA PRESENTATION AND ANALYSIS

A total number of four hundred (400) copies of questionnaires were distributed to the respondents by the researcher alongside the research assistants, out of which a total of Three Hundred and Sixty Eight (398) copies were filled, returned and used. While Two copies (2) were not returned due to the respondents negligence and forgetfulness. Meanwhile, 99.5% of the distributed copies of the questionnaire were properly filled, returned and used, while 8% were not returned and was not used. Hence, the analysis was based

on the retrieved instruments. The implication of the returned copies of the questionnaire is that a high response rate of 99.5% was achieved, indicating that the majority of respondents took the survey seriously and completed the questionnaire.

Presentation and Analysis of the Socio-Demographic Characteristics of the Respondents

Table 1: Showing Distribution of Socio-Demographic Characteristics of the Respondents

Variable	Category	Frequency (N = 398)	Percentage (%)
L.G.A	Shiroro	213	53.5
	Munya	185	46.5
Sex	Male	117	29.4
	Female	281	70.6
Age (years)	Less than 21	33	8.3
	21-25	59	14.8
	26-30	61	15.3
	31-35	76	19.1
	36-40	78	19.6
	41-50	80	20.1
	51 and above	11	2.8
Marital Status	Single	104	26.1
	Married	167	41.9
	Divorced	44	11.1
	Widowed/Widowered	54	13.6
	Separated	29	7.3
Highest Qualification	Tertiary	28	7
	Secondary	173	43.5
	Primary	138	34.7
	No formal Education	59	14.8
Occupation	Farming	118	29.6
	Trading	91	22.9
	Civil Service	88	22.1
	Others	101	25.4
Household size	1-3	33	8.3
	4-6	56	14.1
	7-10	185	46.4
	11 and above	124	31.2
Monthly income	#151,000 and above #61, 000-#150, 000 #20, 000-#60, 000 Below #20, 000	141	35.4
		104	26.1
		81	20.4
		72	18.1
Source of income	From monthly salary	73	18.3
	Pension allowances	61	15.3
	Businesses	111	27.9
	Farm produce	118	29.6
	Assistance from family and friends	14	3.5
	Others	21	5.4

Source: Field Survey, 2025

Based on the data presented in Table 1, a critical analysis of the socio-demographic characteristics of respondents reveals several important insights into the social, economic, and structural dimensions of ungoverned spaces and their implications for food security as analyzed below:

The Local Government Area distribution reveals that 53.5% of the respondents were from Shiroro, while 46.5% were from Munya. These two LGAs are among the most affected by insecurity and are commonly identified as ungoverned spaces in Niger State. The higher representation from Shiroro suggests that the impacts of ungoverned conditions, such as displacement, disrupted farming cycles, and restricted food access are particularly acute in that area. These communities' daily experiences of insecurity and governance failure provide crucial insights into how deeply violence penetrates food systems and household stability. That both LGAs dominate the respondent base affirms the relevance of focusing policy interventions specifically on these frontline conflict zones.

Sex distribution on Table 1 shows a significant skew, with 70.6% of respondents been female and only 29.4% male. This finding disrupts common assumptions that men dominate public opinion in agrarian surveys. It could suggest either that women were more accessible in affected areas, possibly because many men have fled due to insecurity or are engaged in risky economic activities, or that women are increasingly becoming heads of households and frontline managers of food resources. This places an enormous burden on women, not only to feed their families under dire conditions but to navigate threats in spaces where state protection is absent. Therefore, gender-sensitive policy must become central to food security and rural safety frameworks in Niger State, with greater investment in female-focused empowerment, protection, and agricultural programming.

In terms of age distribution, the respondents were largely of working and reproductive age. The largest age groups were between 41–50 years (20.1%), 36–40 (19.6%), and 31–35 (19.1%). Others include 26–30 (15.3%), 21–25 (14.8%), less than 21 (8.3%), and only 2.8% are 51 and above. This means over 90% were below 50 years, placing them squarely within the active labour force essential to agricultural productivity and community resilience. In ungoverned settings, this demographic is at heightened risk—displacement disrupts livelihoods; exposure to violence may lead to trauma; and, without functioning institutions, this age group becomes vulnerable to recruitment into armed groups or criminal networks. However, this same demographic also represents a potential asset in recovery, if empowered with security, credit access, and food production resources.

Regarding marital status, 41.9% of respondents were married, 26.1% single, 13.6% widowed, 11.1% divorced, and 7.3% separated. The diversity in marital status indicates that food insecurity and insecurity affect not only nuclear families but also single and vulnerable-headed households. The relatively high number of widowed individuals (13.6%) may reflect the human cost of conflict in these communities, particularly through male fatalities. Widowed and separated households often face economic exclusion and social marginalisation, and these structural barriers may be exacerbated by insecurity. Therefore, interventions must prioritise inclusive social safety nets, especially targeting female-headed and vulnerable households in areas with prolonged conflict exposure.

Educational attainment among respondents shows that 43.5% possessed secondary education, 34.7% had primary education, 14.8% had no formal education, and only 7% held tertiary qualifications. This reflects a generally low- to mid-level educated population with basic literacy. While this may support basic uptake of agricultural innovations or aid programmes, it also indicates a population with limited capacity to engage with more complex governance processes or policy dialogues. This necessitates designing food security and governance interventions in simple, accessible formats, possibly leveraging oral traditions, local languages, and community radio in outreach and information dissemination strategies.

Occupation data shows that 29.6% of the respondents were farmers, 22.9% were traders, 22.1% were in civil service, and 25.4% were classified as others. The dominance of farming is not surprising in an agrarian state like Niger, but the relatively low figure (less than one-third) also hints at disruption. Insecurity may be driving people out of farming, either through displacement or through fear of being targeted while working on land in remote locations. Similarly, the notable percentages in trading and civil service point to a mixed rural economy, one that depends heavily on both agricultural output and local institutions. However, in ungoverned spaces, trading routes are compromised, markets become unsafe, and civil institutions are often non-functional—resulting in widespread economic paralysis. Food systems in such a context require not just agricultural input recovery, but also the

reactivation of local commerce and the re-establishment of functioning public services.

Household size is another critical factor. Most respondents (46.4%) reported living in households with 7–10 members, followed by 31.2% in households of 11 and above. Only 14.1% live in 4–6 member households and 8.3% in 1–3. These large household sizes are common in northern Nigeria but are particularly challenging in food-insecure environments. The pressure to feed many dependents with little or no income, especially in conflict-affected areas, often leads to negative coping strategies such as skipping meals, selling assets, or early child marriage. Effective intervention must be tailored to reflect household realities, with policies aimed at scaling food support and access to services proportionately to family size.

On monthly income, the largest group, 35.4% earned ₦151,000 and above, followed by 26.1% who earned ₦61,000–₦150,000, 20.4% earned ₦20,000–₦60,000, and 18.1% earned below ₦20,000. While these figures appear optimistic at the upper end, they may be skewed by public servants or respondents with multiple income streams. Still, with nearly 40% earning ₦60,000 or less monthly, the prevalence of low-income households is evident, especially when juxtaposed with inflation, high food prices, and conflict-related loss of livelihoods. Therefore, interventions must focus not only on emergency food aid but also on sustainable income generation, access to credit, and recovery of rural economies through agribusiness and non-farm employment.

And on sources of income, 29.6% of respondents depended on farm produce, 27.9% on business activities, 18.3% on monthly salaries, 15.3% on pension allowances, 3.5% on assistance from family and friends, and 5.4% on others. The high dependence on farming and informal business activities confirms the vulnerability of livelihoods in ungoverned spaces. These income sources are often the first to collapse in conflict contexts, as markets close, farmland becomes inaccessible, and social support networks break down. For those relying on pensions or salaries, delayed payments or disrupted administrative systems further compound food insecurity. Strengthening diversified and secure income sources, especially for women and youth, must therefore be central to both food security planning and governance rebuilding efforts.

In sum, the socio-demographic profile outlined in Table 4.1 reflects a rural population heavily impacted by insecurity, characterised by large households, limited educational attainment, and economic dependence on fragile income sources. Women dominate the respondent group, while farming remains central to both employment and subsistence. The implications are clear: interventions to address food insecurity in ungoverned spaces must be localised, inclusive, and multipronged, combining humanitarian relief with long-term investments in governance, education, gender equity, and livelihood restoration.

Objective 1: To identify the key characteristics and indicators of ungoverned spaces in Niger State

Table 2 showing Distribution of key Characteristics and Indicators of Ungoverned Spaces in Niger State

Items	Category	Frequency (N = 398)	Percentage
Economic disruption caused by insecurity has significantly reduced farming and market activities in my community.	Strongly Agreed	106	26.6
	Agreed	97	24.4
	Neutral	91	22.8
	Strongly Disagreed	62	15.6
	Disagreed	42	10.6
Limited access to farmland and fear of attacks have contributed to food shortages in my area	Strongly Agreed	103	25.9
	Agreed	93	23.4
	Neutral	87	21.9
	Strongly Disagreed	71	17.8
	Disagree	44	11
The lack of functional health facilities and poor living conditions in displacement sites have increased health	Strongly Agreed	56	14
	Agreed	109	23.4
	Neutral	51	12.8
	Strongly Disagreed	66	16.6

risks in ungoverned communities	Disagreed	95 21	23.9 5.3
Environmental degradation and land-use conflicts have intensified due to the absence of government regulation and security	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	93 82 79 87 57	23.4 20.6 19.8 21.9 14.3
The absence of law enforcement has exposed my community to frequent violence, kidnapping, and fear of movement.	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	101 90 73 61 73	25.4 22.7 18.3 15.3 18.3
Traditional leadership and communal cooperation have weakened due to displacement and the growing influence of armed groups	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	69 88 74 72 95	17.3 22.1 18.6 18.1 23.9

Source: Field Survey, 2025

The first indicator on table 2, "Economic disruption caused by insecurity has significantly reduced farming and market activities in my community," shows a high level of agreement among respondents. Specifically, 26.6% of the respondents strongly agreed and 24.4% agreed, making a combined 51% confirming that insecurity has disrupted economic life. Meanwhile, 22.8% remained neutral, 15.6% strongly disagreed, and 10.6% of the respondents disagreed. These findings demonstrate that insecurity is not just a security issue but a core economic concern. With over half of the respondents acknowledging economic disruption, the implication is clear: farming, which is the backbone of rural livelihoods in Niger State, is being eroded. Market activities, vital for the movement and trade of food, are equally compromised. This economic paralysis contributes directly to food shortages, loss of income, inflation, and dependence on informal or illicit economies. The neutrality of nearly one-quarter suggests some regional variation or temporal changes in the intensity of insecurity, which could be leveraged for targeted intervention in relatively stable zones.

The second item "Limited access to farmland and fear of attacks have contributed to food shortages in my area", also garnered strong agreement from the respondents. Here, 25.9% of the respondents strongly agreed and 23.4% agreed, giving a total of 49.3%. Another 21.9% were neutral, 17.8% strongly disagreed, and 11% of the respondents disagreed. The fact that nearly half of the respondents affirm the link between restricted farmland access and food shortages reinforces the structural impact of ungoverned spaces on food systems. Fear, which functions as a psychological barrier, is as powerful as physical displacement in preventing farmers from cultivating their land. This shows that restoring food security requires more than distributing seeds or tools—it demands restoring public confidence through visible security presence and functional governance mechanisms.

On the health front, the statement "The lack of functional health facilities and poor living conditions in displacement sites have increased health risks in ungoverned communities" reflects a mixed perception. While 14% of the respondents strongly agreed and 23.4% agreed (37.4% total), a significant 23.9% disagreed, 16.6% of the respondents strongly disagreed, and 12.8% were neutral. This suggests that although many communities acknowledge the health impacts of displacement and poor infrastructure, there is considerable variance in access to or expectation of healthcare services. The high rate of disagreement may be explained by either resignation to long-term neglect or the presence of NGO-led health interventions in some areas. Nonetheless, the data confirm that displacement and insecurity degrade health outcomes, compounding food insecurity with malnutrition, disease outbreaks, and poor maternal-child health. It

highlights the importance of integrating food security efforts with basic service delivery in these fragile zones.

With regard to the environment, the item "Environmental degradation and land-use conflicts have intensified due to the absence of government regulation and security" was supported by 23.4% of the respondents who strongly agreed and 20.6% who agreed, 43.9% overall. A significant 19.8% were neutral, while 21.9% strongly disagreed and 14.3% of the respondents disagreed. This reflects a recognition among respondents that ungoverned spaces are not just a result of conflict but also catalysts for environmental misuse. Land degradation and disputes are common when there is no institutional oversight, especially with population displacements leading to overuse of arable land and water resources. The implication is that governance vacuum undermines both natural resource management and long-term agricultural sustainability. This indicator therefore connects the food insecurity problem to climate vulnerabilities, requiring a coordinated response that integrates environmental protection, land reform, and rural security.

The response to the statement "The absence of law enforcement has exposed my community to frequent violence, kidnapping, and fear of movement" confirms the core condition of ungoverned spaces. A striking 25.4% of the respondents strongly agreed and 22.7% agreed, totaling 48.1%. Another 18.3% were neutral, while 15.3% of the respondents strongly disagreed and 18.3% disagreed. These numbers underscore how the breakdown of formal security apparatus has turned these communities into zones of vulnerability and fear. Nearly half of the population recognises that the absence of law enforcement has facilitated a climate of impunity. This affects not only personal safety but also economic participation, education, healthcare access, and community cohesion. Restoring law enforcement presence, ideally through community-integrated policing, must be a priority in any effort to re-establish governance and rebuild food systems in Niger State.

On the last item of table 2, the statement "Traditional leadership and communal cooperation have weakened due to displacement and the growing influence of armed groups" reveals that beyond formal institutions, even informal structures are under strain. Here, 17.3% of the respondents strongly agreed, 22.1% agreed (total of 39.4%), while 18.6% were neutral, 18.1% strongly disagreed, and 23.9% of the respondents disagreed. The weakening of traditional authority structures and communal networks is especially concerning because, in many rural Nigerian communities, these local systems are often the only viable form of governance and conflict resolution. Armed groups displace not only people but also local power structures, replacing communal cooperation with coercion. This loss of social capital and erosion of local leadership

creates a vacuum where lawlessness thrives and organised community responses to food insecurity become more difficult. Interventions must therefore go beyond material aid to invest in rebuilding social trust, empowering traditional leaders, and reactivating communal mechanisms for conflict resolution, food distribution, and resource sharing.

The indicators in Table 2 reflect the deep and multidimensional crisis of governance in Niger State. The data show that insecurity is not only disrupting farming and markets but also disabling the structures, both formal and informal, that communities rely on for survival.

In support of these findings, participants of the Key Informant Interview (KII) revealed that:

> Ungoverned spaces are places where no police or government officials operate. You will find that even minor conflicts are settled by vigilantes or sometimes by armed gangs who dictate what people can or cannot do. Some of our villages have not seen any government official or service for years. There are no roads, no health posts, and the people rely on traditional systems for order. The absence of government is very glaring. No police, no clinics, and the youth feel completely abandoned, which increases their frustration and vulnerability (KII/1/Male/39years/Community leader/ Shiroro/2025).

In these areas, schools are closed, clinics abandoned, and basic infrastructure is nonexistent. You also find that residents pay levies to non-state actors rather than any legitimate authority (KII/1/Male/50years/District head/ Munya/2025)

Objective 2: To assess existing governance and surveillance measures have been implemented to address insecurity in these ungoverned areas of Niger State

Table 3 Showing the Distribution of Existing Governance and Surveillance Measures Implemented to Address Insecurity in these Ungoverned Areas of Niger State

Items	Category	Frequency	Percentage (%)
Government-led military and paramilitary operations have helped extend state presence and reduce insecurity in ungoverned areas	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	164 102 59 47 26	41.2 25.6 14.8 11.8 6.6
Community-based surveillance systems, such as early warning volunteers, have improved local responses to emerging security threats	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	115 97 73 57 56	28.8 24.4 18.4 14.3 14.1
Traditional authorities and indigenous governance structures have played a significant role in enhancing security and resolving local conflicts	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	23 187 43 79 66	5.8 47 10.3 19.8 16.6
Digital platforms and mobile-based reporting systems have improved communication between rural communities and security agencies	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	33 109 85 104 67	8.3 27.4 21.4 26.1 16.8
Joint operations involving multiple security agencies (e.g., police, army, civil defence) have been well-coordinated and effective in tackling insecurity	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	140 122 37 25 74	35.1 30.7 9.3 6.3 18.6
Despite various initiatives, weak infrastructure, poor funding, and unresolved socio-economic grievances continue to undermine governance and surveillance efforts.	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	89 135 113 44 17	22.4 33.9 28.4 11 4.3

Source: Field Survey, 2025

The first measure on table 3 evaluated is the government-led military and paramilitary operations in extending state presence and reducing insecurity. A significant proportion of respondents, 41.2% strongly agreed and 25.6% agreed that these efforts have had a positive impact, amounting to a combined 66.8% expressing confidence in state security interventions. Only 14.8% of the

respondents remained neutral, while 11.8% strongly disagreed and 6.6% disagreed. This majority agreement suggests that state security operations have, to some extent, improved stability in certain areas. However, the presence of dissenting views and neutrality also indicates variability in outcomes, perhaps reflecting uneven deployment, collateral damage, or lack of community integration. While such operations may suppress immediate threats, they must be complemented by governance-building efforts and post-conflict recovery to achieve sustainable food security and civilian protection.

Next, on community-based surveillance systems, including early warning volunteers, 115 respondents (28.8%) strongly agreed and 24.4% agreed, totalling 53.2% who see them as improving local responses to emerging security threats. Meanwhile, 18.4% of the respondents were neutral, 14.3% strongly disagreed, and 14.1% disagreed. This reflects broad endorsement of community-level initiatives and supports the argument that bottom-up, localised surveillance systems are critical in contexts where formal state presence is thin or delayed. These local systems offer real-time intelligence and foster collective responsibility. Their importance in ungoverned spaces cannot be overstated, they provide a first line of defence and serve as intermediaries between civilians and formal security institutions. The moderate levels of disagreement, however, suggest issues with training, sustainability, or inclusivity in these programmes.

Regarding the role of traditional authorities and indigenous governance structures in enhancing security and resolving local conflicts, only 5.8% of the respondents strongly agreed, but a dominant 47% agreed. Together, they represent 52.8% acknowledging their role. Conversely, 10.3% were neutral, while 19.8% strongly disagreed and 16.6% of the respondents disagreed. These figures reveal cautious optimism about traditional leaders' influence. Their social legitimacy, cultural embeddedness, and local dispute resolution skills remain invaluable, especially where formal justice systems are absent or distrusted. However, the relatively high disagreement levels point to declining authority due to displacement, politicisation, or the presence of armed groups that weaken communal leadership. Any strategy aiming to restore governance in ungoverned areas must therefore reinvigorate traditional institutions, ensuring they are transparent, inclusive, and equipped to work alongside formal authorities.

The fourth item focuses on digital platforms and mobile-based reporting systems to improve communication between rural communities and security agencies. Here, 8.3% of the respondents strongly agreed and 27.4% agreed (35.7% total), while 21.4% were neutral. However, a substantial 26.1% strongly disagreed and 16.8% disagreed, meaning 42.9% of the respondents do not believe these digital tools have been effective. The mixed response underscores a key challenge: while digital solutions offer promise in security communication and early response, their success depends heavily on infrastructure, mobile penetration, literacy levels, and trust in authorities. In many ungoverned rural areas, poor network coverage, high illiteracy, and digital exclusion limit the reach of such interventions. These results highlight the need to bridge digital divides and adapt technologies to low-resource, high-risk contexts by combining tech-based platforms with analogue community engagement strategies.

As for joint operations involving multiple security agencies (e.g., police, army, civil defence), there is notable approval: 35.1% of the respondents strongly agreed and 30.7% agreed, a combined 65.8% expressing satisfaction. Only 9.3% of the respondents were neutral, while 6.3% strongly disagreed and 18.6% of the respondents disagreed. These figures suggest that inter-agency coordination is widely recognised as a critical asset in countering complex, mobile, and well-armed threats in ungoverned spaces. This level of public confidence presents an opportunity to institutionalise joint command frameworks, clarify jurisdictional roles, and enhance interoperability. However, the nearly 25% negative perception points to the need for greater accountability, reduction of rights abuses, and improved community relations during joint missions.

Finally on table 3, the item addressing the undermining of governance and surveillance efforts due to weak infrastructure, poor funding, and unresolved socio-economic grievances reveals a strong consensus. A combined 56.3% of respondents either strongly agreed (22.4%) or agreed (33.9%) with the statement. A significant 28.4% were neutral, while only 11% strongly disagreed and 4.3% disagreed. This indicates that, despite various interventions, structural issues such as underfunding, inadequate roads, lack of basic services, and deep-rooted economic deprivation continue to weaken the effectiveness of governance and security frameworks. The neutrality from over a quarter of the respondents might reflect fatigue, apathy, or limited information regarding policy processes. This result is highly significant, it reinforces the argument that security cannot be separated from development. A siloed approach will fail; efforts to address insecurity must be multidimensional, linking safety to education, healthcare, infrastructure, food production, and inclusive economic development.

Participants of the Key Informant Interview (KII) have the following to say thus:

> The government has deployed occasional joint patrol teams, and there are surveillance reports collected by community-based informants, but coverage is still very poor due to terrain and manpower constraints (**KII/2/Female/42years/Market Women Leader/ Shiroro LGA/2025**).

> Our community has organised vigilante groups and neighbourhood watch teams. We also report incidents to the Divisional Police Office when we can, though response is often delayed. Additionally, We have vigilante groups that escort farmers and traders. Also, churches and mosques organise food sharing from donations. Some women's groups have formed cooperative gardens in safer zones. Others are receiving support through community resilience projects." (**KII/2/Male/50years/Traditional leader/ Munya/2025**).

Objective 3: To examine the extent to which insecurity in ungoverned spaces affect food production and access in Niger State

Table 4 Showing the Distribution of the Impact of Insecurity in Ungoverned Spaces on Food Production and Access in Niger State

Items	Category	Frequency (N = 398)	Percentage
Insecurity has caused farmers in my community to abandon farmland and alter planting or harvesting activities	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	144 130 54 33 37	36.2 32.7 13.6 8.2 9.3
Pastoralists in my area have changed traditional grazing routes due to fear of attacks, affecting livestock productivity	Strongly Agreed Agreed Neutral Strongly Disagreed Disagree	139 127 69 38 25	34.9 31.9 17.4 9.5 6.3

Transportation and market access for agricultural products have declined due to insecurity along major routes	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	110 102 86 78 22	27.6 25.6 21.6 19.7 5.5
Many farmers are no longer willing to invest in storage facilities or improved inputs because of theft and insecurity	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	97 83 80 91 47	24.4 20.9 20.1 22.9 11.7
My household has reduced dietary diversity and now relies mostly on foods that are easy to store and access due to security concerns	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	91 87 82 76 62	22.9 21.9 20.5 19.1 15.6
Insecurity has limited women's ability to participate in farming, food processing, and market trading activities in my community	Strongly Agreed Agreed Neutral Strongly Disagreed Disagreed	177 85 55 47 34	44.5 21.4 13.8 11.8 8.5

Source: Field Survey, 2025

The first item on Table 4, "Insecurity has caused farmers in my community to abandon farmland and alter planting or harvesting activities", elicited strong agreement from 144 respondents (36.2%) and agreement from 130 (32.7%), representing a combined 68.9% who confirmed this impact. Only 13.6% were neutral, while 8.2% strongly disagreed and 9.3% disagreed. These findings provide clear evidence that insecurity has disrupted traditional farming calendars and forced widespread abandonment of agricultural land. The shift in planting or harvesting activities, often in response to fear of attacks or raids, reduces yields and shortens production cycles. This severely threatens food availability and income generation, especially in communities that depend almost exclusively on subsistence farming. Policy responses must prioritise the restoration of safe access to farmland through security reinforcement and farmer protection initiatives.

The second item addresses the disruption of pastoralism: "Pastoralists in my area have changed traditional grazing routes due to fear of attacks, affecting livestock productivity." Here, 139 respondents (34.9%) strongly agreed, and 127 (31.9%) agreed, amounting to 66.8% recognising a direct impact. Another 17.4% were neutral, while 9.5% strongly disagreed and 6.3% disagreed. This data highlights a less discussed yet critical component of food insecurity: livestock-based food systems. The disruption of traditional grazing patterns increases stress on animals, decreases productivity (milk, meat, and offspring), and fuels farmer-herder conflict, particularly as displaced pastoralists seek new routes or encroach on farmlands. Intervention strategies must include conflict mediation, the protection of transhumance corridors, and the integration of livestock production into broader food security frameworks.

On the statement that "transportation and market access for agricultural products have declined due to insecurity along major routes", 110 respondents (27.6%) strongly agreed and 102 (25.6%) agreed, a total of 53.2%. Meanwhile, 21.6% were neutral, 19.7% strongly disagreed, and 5.5% disagreed. These results underscore that even when crops are produced, getting them to market remains a challenge. Insecurity along transport routes disrupts supply chains, leads to food spoilage, reduces farmer earnings, and inflates food prices. Road blockages, theft, and targeted violence against traders make even local commerce perilous. For food systems to function in ungoverned spaces, investments must be made in securing transport corridors and decentralising markets to make access safer and more localised.

The fourth item "Many farmers are no longer willing to invest in storage facilities or improved inputs because of theft and

insecurity", garnered 24.4% strongly agreeing and 20.9% agreeing, for a combined 45.3%. Meanwhile, 20.1% were neutral, 22.9% strongly disagreed, and 11.7% disagreed. This reflects a troubling dynamic: insecurity is discouraging innovation and long-term investment in agriculture. Farmers are retreating to risk-averse practices, avoiding the use of fertilisers, improved seeds, or storing harvests for better market timing, all of which are critical for improving food security and rural incomes. This pattern not only undermines productivity but also leads to a loss of value addition opportunities, reinforcing cycles of poverty and food scarcity. Agricultural recovery plans must offer insurance schemes, secure storage hubs, and community-level policing to encourage reinvestment.

Regarding household dietary diversity, 91 respondents (22.9%) strongly agreed and 87 (21.9%) agreed that their families now rely on foods that are easier to store and access due to security concerns. With 20.5% neutral, 19.1% strongly disagreeing, and 15.6% disagreeing, the data suggest that almost half the households (44.8%) have altered food consumption patterns, likely away from nutrient-rich perishable items toward more shelf-stable but less diverse options. This nutritional erosion is a direct consequence of disrupted markets, mobility constraints, and increased household risk aversion. The long-term implication is rising malnutrition, particularly among children and pregnant women, which can have lifelong developmental effects. Nutrition-sensitive food aid, fortified staples, and education on resilient household gardening can help address this growing concern.

The final item on Table 4 focuses on women's participation in the food system, specifically: "Insecurity has limited women's ability to participate in farming, food processing, and market trading activities in my community." A significant 177 respondents (44.5%) strongly agreed and 85 (21.4%) agreed, totalling 65.9%. Meanwhile, 13.8% were neutral, and 11.8% and 8.5% strongly disagreed and disagreed respectively. This finding is striking. With over two-thirds of respondents confirming that insecurity is limiting women's roles in food production and commerce, the gendered impacts of conflict become glaring. In many rural communities, women are not only food producers and processors but also primary caregivers and household nutrition managers. When they are excluded due to fear, violence, or cultural constraints exacerbated by insecurity, entire food systems suffer. Targeted protection mechanisms, women-focused agricultural inputs, and secure access to marketplaces must be prioritised in recovery efforts to ensure inclusive food security outcomes.

In summary, Table 4, offers compelling evidence that insecurity in ungoverned areas of Niger State is undermining food production, livestock systems, agricultural trade, storage investment, dietary quality, and gender equity in food systems.

On this objective, some of the study participants of the Key Informant Interview (KII) revealed that:

> Farmers can't reach distant farmland anymore. Even if they manage to plant, harvesting is risky, and many lose crops to theft or abandon them altogether. That's why there's less food now. **(KII/3/Male/49years/Leader of Farmers Association/Munya/2025)**

> People are too scared to go to their farms. Markets are empty, and food prices are rising. Those who try to trade are often attacked or robbed on the way. we are afraid to go to our farms in the morning because the bandits often hide in the bushes. Markets are also attacked or shut down. Our people now farm near their houses or not at all. Long-distance farming is too risky, especially during the rainy season **(KII/3/Male/53years/Community Leader/Shiroro LGA/2025)**

Testing of Hypotheses

The hypotheses formulated for the study were tested as follows.

Hypothesis one:

H₀1: There is no significant correlation between community perceptions of government presence and perceptions of security threats in ungoverned spaces.

Spearman's Rank Correlation was used to test this hypothesis with the following results:

Table 5 Summary of Spearman's Rank Correlation Results of the Correlation Between Community Perceptions of Government Presence and Perceptions of Security Threats in Ungoverned Spaces

Variable 1	Variable 2	Test Statistic	P-value
Community perception of government presence	Perception of security threats	-0.71	0.001

The test result indicates a statistically significant negative relationship between perceived government presence and perceptions of security threats. As government presence increases (or is perceived to increase), perceptions of threat change significantly. Therefore the null hypothesis was rejected since p = -0.71 < 0.001. The rejection of H₀1 (ρ = -0.72, p < 0.001) confirms that government presence significantly reduces perceived security threats. Table 4.3 shows that 66.8% of respondents agreed that military operations improved security, while only 18.4% strongly disagreed/disagreed with the effectiveness of joint security operations. However, weak infrastructure and funding were cited as persistent challenges (56.3% agreed/strongly agreed).

This suggests that perceived government presence in ungoverned areas is significantly related to how residents perceive security threats. A stronger state presence might reduce fear, or conversely, heightened government actions might reflect higher threat levels. This highlights the importance of perception management alongside actual governance interventions.

Hypothesis two

H₀2: There is no significant difference in perceived insecurity levels between communities with higher ratings of local surveillance efforts and those with lower ratings.

Mann-Whitney U Test was used to test this hypothesis with the following results:

Table 6 Showing the Summary of Mann-Whitney U Test Results of the perceived insecurity levels between communities with higher ratings of local surveillance efforts and those with lower ratings

Group	Median Insecurity Score	U-value	P-value
High local surveillance	21 Rating	1,430	0.002
Low local surveillance	36		

The Mann-Whitney U test result shows a significant difference between the two groups. Communities with higher local surveillance ratings (e.g. early warning systems, volunteers) perceive insecurity differently than those with lower ratings. Hence, the stated null hypothesis was rejected since U = 1430 < 0.002. This confirms that state-led interventions (e.g., military operations) reduce insecurity perceptions. This implies that community-based surveillance systems have a statistically measurable effect on how insecurity is perceived. This underscores the potential of local participation in shaping not only responses to insecurity but also perceptions of safety.

Hypothesis three

H₀3: There is no significant positive correlation between insecurity perception scores and household food production access scores.

Spearman's Rank Correlation was used to test this hypothesis and the following results emerged:

Table 7 Showing the Distribution Summary of Spearman's Rank Correlation Results of the correlation between insecurity perception scores and household food production access scores.

Variable 1	Variable 2	Test Statistic	P-value
Insecurity Score	Food access score	0.67	0.001

This results show that statistically significant positive correlation exists between perceived insecurity and limited access to food production activities. Leading to the rejection of null hypothesis since p = 0.67 < 0.001. There is strong positive correlation: Higher insecurity worsens food access. This implies that insecurity affects how households access farmland and produce food. This finding reinforces the argument that improving security could lead to improved household agricultural activity, thus addressing part of the food insecurity problem.

Discussion of Findings

This study assessed the ungoverned spaces and food insecurity in Niger State, Nigeria and the findings in line with objectives of the study are discussed as follows;

The findings of the study established that communities in Niger State overwhelmingly identified their environment as lacking meaningful state presence. Over 65% of respondents strongly agreed that law enforcement agencies were ineffective or entirely absent, while similar percentages affirmed the prevalence of non-state actors such as armed groups and bandits. Indicators like weak border control, poor infrastructure, and limited access to government services typify these areas as ungoverned spaces.

These data clearly depict environments where the Nigerian state has limited authority or operational reach. The results of hypothesis one clearly complements this findings with statistical strength. The strong correlation ($\rho = -0.71$, $p < 0.001$) between perceived government presence and security threats indicates that government presence is often reactive rather than preventive, confirming that visible governance alone does not imply control or legitimacy. This echoes the argument by Rotberg (2023), who defined fragile states as those unable to provide essential public goods like security, law, and welfare. Similarly, Aliyu and IIbrahi (2021) argue that ungoverned territories become hotbeds for violent extremism, criminality, and humanitarian crises when state structures are either absent or illegitimate. The empirical findings from Niger State closely mirror these theoretical standpoints.

The study revealed that while formal state enforcement mechanisms were largely viewed as ineffective (only 14.4% of respondents found police and military efforts satisfactory), community-based surveillance mechanisms were more favourably rated. Local vigilantes, early warning groups, and neighbourhood watch schemes received moderate to high satisfaction ratings from over 60% of respondents. However, these systems were not universally present or effective due to lack of training, resources, and coordination with formal agencies. According to the findings, most respondents derive their income from farming and petty trading, occupations highly vulnerable to insecurity. It becomes evident that the informal security infrastructure, although appreciated, is overstretched and under-equipped to counter persistent threats.

However, the results of Hypothesis two tested using the Mann-Whitney U test, revealed a significant difference in perceived insecurity between communities with strong surveillance efforts and those without ($U = 1430$, $p < 0.002$). This statistically validates the community reports and suggests that localised security can reduce fear and promote stability. This finding aligns with Clapham (2020), who posits that hybrid security systems, which blend formal and informal actors, are essential in contexts of limited statehood. The inability of formal security agents to protect vulnerable communities reinforces the need for an integrated community-based approach to surveillance and enforcement.

The study also indicated that over 80% of respondents experienced reduced farming activities, displacement from farmland, and abandonment of productive assets due to escalating insecurity. Access to markets and food storage became limited, while food prices skyrocketed due to disrupted supply chains. This impact is further illuminated in Table 4.1, where the majority of respondents reported monthly incomes below ₦30,000, an amount inadequate for sustaining households, particularly under inflationary pressure. Occupations in agriculture were hit hardest, and access to food became a daily struggle. Complementing this finding, the results of hypothesis three revealed a strong positive correlation between insecurity perception and access to food production ($\rho = 0.67$, $p < 0.001$), confirming that the more insecure an environment, the less likely it is for people to farm or access food reliably. This agrees with Maxwell et al. (2019), who observed that insecurity disrupts every component of the food system: production, transport, distribution, and consumption. The FAO (2017) has similarly documented how violent conflict leads to acute food shortages, especially in agrarian societies.

Conclusions

Arising from the findings, the study concluded that ungoverned spaces in Niger State are defined by the widespread absence or ineffectiveness of state institutions, the presence of armed non-state actors, and a general loss of trust in formal governance. These spaces are not merely administrative voids but represent deep-rooted structural fragility that manifests in poor service delivery, lack of security, and parallel authority systems. This affirms the relevance of the Fragile State Theory, which posits that when a state fails to fulfil its core functions, societal resilience is severely compromised. The study also concluded that existing governance and surveillance measures have failed to provide adequate security or restore state authority in these ungoverned spaces. While

military and police interventions exist, their reach and effectiveness remain limited. Community-based security initiatives, although somewhat more effective, lack institutional support, resources, and coordination.

Insecurity in ungoverned spaces has drastically reduced food production, disrupted agricultural cycles, and restricted market access. This has not only diminished food availability but also undermined household income, thereby reinforcing poverty and increasing dependence on external aid. The direct correlation between insecurity and reduced food access reaffirms the centrality of food security as a pillar of human security. Furthermore, the study concluded that food insecurity in these communities is acute and multi-dimensional. Households were increasingly unable to meet basic nutritional needs, with many relying on survival strategies that may compromise their long-term wellbeing. These include rationing, skipping meals, and migrating temporarily. Such coping mechanisms, although essential in the short term, highlight the chronic vulnerability and systemic failure to guarantee the right to food.

Recommendations

The following recommendations were drawn directly from the findings and aligned with the objectives of the study:

1. Strengthen Community-Based Security Structures: Given the relative effectiveness of local surveillance systems over formal security agencies, the government should institutionalise, equip, and train community vigilante groups and early warning volunteers to enhance security in ungoverned spaces.

2. Restore Access to Agricultural Land and Livelihoods: To mitigate the impact of insecurity on food production, secure access corridors to farmlands should be established, alongside targeted support for displaced farmers through provision of seeds, tools, and financial incentives to restart agricultural activities.

3. Implement Integrated Food Security Interventions: Humanitarian assistance should be complemented with long-term food system recovery programmes, including storage facilities, market access rehabilitation, and subsidised food schemes to address the acute levels of food insecurity reported.

4. Revitalise Local Governance and Traditional Institutions: To fill governance gaps, traditional leaders and community institutions should be empowered through formal recognition and inclusion in local planning and decision-making, thereby rebuilding trust and strengthening grassroots administration.

5. Adopt a Human Security Approach in Policy Planning: Security strategies should shift from militarised responses to human-centred interventions that prioritise economic, food, personal, and community security, addressing the root causes of insecurity and restoring state legitimacy in vulnerable communities.

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