

Socio-Economic Impacts Of Population Growth Among Indigenous Communities In Kirikasamma Lga, Jigawa State, Nigeria

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Abstract- Population growth is a critical demographic factor that influences socio-economic development, particularly in rural communities of developing countries. This study examines the socio-economic impacts of population growth among indigenous communities in Kirikasamma Local Government Area (LGA) of Jigawa State, Nigeria. The objectives were to assess the pattern and trend of population growth over time and evaluate its effects on employment, agriculture, education, healthcare, poverty, and living conditions. A mixed-methods approach was employed, combining primary data from structured questionnaires administered to 200 adult residents selected through multistage sampling, with secondary data from government reports, policy documents, and academic literature. Quantitative data were analyzed using descriptive statistics, including frequencies, percentages, Weighted Mean Scores (WMS), and rankings, while qualitative data were thematically analyzed to capture contextual insights. The results reveal a significant population increase over fifty years, with growth nearly tripling from 1975 to 2025. Respondents identified increased poverty (WMS = 3.61), inadequate educational facilities (WMS = 3.48), unemployment (WMS = 3.48), and inadequate healthcare (WMS = 3.48) as the most pressing socio-economic impacts. Other concerns included housing shortages, rising food prices, insecurity, and pressure on farmland. These findings indicate that rapid population growth has intensified economic hardship, strained social infrastructure, and reduced living standards. In conclusion, population growth in Kirikasamma LGA presents both opportunities and challenges, with socio-economic pressures outweighing potential benefits due to limited resources and infrastructure. The study recommends targeted interventions in poverty alleviation, education, healthcare, employment creation, agricultural productivity, and gender-inclusive planning to mitigate the adverse effects of population growth and promote sustainable development.

Keywords—Population Growth, Socio-Economic Impacts. Indigenous communities. Kirikasamma LGA, Rural Development, Sustainable Livelihoods.

INTRODUCTION

Population growth is a fundamental demographic process that significantly influences socio-economic development across the globe, particularly in developing countries such as Nigeria. Population growth refers to the increase in the number of individuals living within a defined geographical area over a specified period, resulting from the interaction of fertility, mortality, and migration. While population increase can serve as a potential driver of economic growth by expanding the labour force and market size, rapid and unplanned population growth often creates substantial development challenges when it outpaces the capacity of social institutions, economic systems, and environmental resources (NPC, 2021). At the global scale, population growth has become a major development concern, especially in low- and middle-income countries where economic expansion and infrastructural development lag behind demographic change. The United Nations (2022) reported that the global population exceeded 8 billion in 2022, with most of this increase occurring in developing regions of Africa and Asia. Nigeria, as the most

populous country in Africa, represents a critical case within this global demographic transition. The National Population Commission (NPC, 2021) estimates Nigeria's population at over 200 million, driven by persistently high fertility rates, declining mortality, and a youthful age structure. These demographic characteristics intensify population pressure at the national and sub-national levels, particularly in rural local government areas where economic diversification and social services are limited. The implications of population growth are best captured through its socio-economic impacts, a concept that encompasses the effects of demographic change on livelihoods, employment, income distribution, poverty levels, access to education and healthcare, housing conditions, food security, and overall quality of life. In many parts of rural Nigeria, rapid population growth has contributed to rising unemployment, increased poverty, pressure on agricultural land, declining farm sizes, environmental degradation, and overstretched public services (Akinyemi & Isiugo-Abanihe, 2014; Todaro & Smith, 2015). These impacts are not uniformly distributed but tend to be more severe among

marginalized and resource-dependent populations. Particularly vulnerable to the effects of population growth are indigenous communities, which are defined as groups of people who are historically connected to specific territories, maintain distinct cultural and social identities, and rely largely on local natural resources for their economic and social survival. In Nigeria, indigenous rural communities are predominantly agrarian, with livelihoods centered on subsistence farming, livestock rearing, and other land-based activities. As population growth accelerates within these communities, increased competition for land, water, and other natural resources often undermines traditional livelihood systems, intensifies poverty, and heightens social vulnerability. Kirikasamma Local Government Area (LGA) in Jigawa State provides a clear illustration of these dynamics. The LGA is predominantly rural and inhabited mainly by indigenous communities whose primary occupation is agriculture. However, rapid population growth in the area has placed increasing pressure on available farmland, leading to land fragmentation, reduced soil fertility, and declining agricultural productivity. This situation has been exacerbated by limited access to modern farming technologies, credit facilities, and extension services. Consequently, household incomes remain low, food insecurity is widespread, and poverty levels are high. In addition to its impact on livelihoods, population growth in Kirikasamma LGA has significantly strained social infrastructure. Educational facilities are often overcrowded, inadequately staffed, and poorly equipped, limiting educational attainment and human capital development. Healthcare services are similarly overstretched, with limited facilities and personnel struggling to meet the needs of a growing population. Housing shortages and inadequate sanitation further compound the socio-economic challenges faced by indigenous communities. These conditions contribute to declining living standards and increased vulnerability, particularly among women, children, and the elderly. Furthermore, Jigawa State has consistently recorded high poverty indices compared to many other states in Nigeria (NBS, 2022). This reflects the broader interaction between population growth, weak economic diversification, and limited development investment in rural northern Nigeria. For indigenous communities in Kirikasamma LGA, population growth has become a central factor shaping everyday socio-economic experiences, influencing access to land, employment opportunities, education, healthcare, and basic social amenities. Despite the growing recognition of the population–development nexus, empirical studies that examine the localized socio-economic impacts of population growth among indigenous rural communities remain limited. Most existing studies rely on national or state-level data, which often mask significant variations at the local level. Consequently, there is a need for community-based studies that capture the lived experiences of indigenous populations and provide context-specific evidence. Against this background, this study examines the socio-economic impacts of population growth among indigenous communities in Kirikasamma Local Government Area of Jigawa State,

Nigeria. By integrating key demographic concepts with empirical data at the local level, the study seeks to contribute to academic discourse on population and development, while also providing evidence-based insights to guide policymakers, development agencies, and local authorities in designing interventions aimed at promoting sustainable, inclusive, and people-centered rural development.

Statement of the Research Problem

Population growth has emerged as a critical development concern in many rural areas of Nigeria, including Kirikasamma Local Government Area (LGA) of Jigawa State. Over the years, the LGA has experienced a steady increase in population, largely driven by high fertility rates, declining mortality, and natural population increase. Although population growth can potentially stimulate economic development through the expansion of the labour force, the rapid pace of growth in Kirikasamma LGA has increasingly been associated with mounting socio-economic challenges that threaten sustainable livelihoods and overall community well-being. Despite the rising population, the provision and expansion of essential socio-economic infrastructure in Kirikasamma LGA have not kept pace with demographic change. Critical sectors such as healthcare, education, employment, housing, and agriculture are under increasing pressure. Healthcare facilities are often overstretched, schools are overcrowded and inadequately equipped, and employment opportunities remain limited, resulting in high levels of unemployment and underemployment. Agriculture—the mainstay of the indigenous population—has also been adversely affected by increased population pressure on land, leading to land fragmentation, declining agricultural productivity, and heightened food insecurity. Furthermore, population growth has contributed to rising poverty levels and a declining quality of life among indigenous communities in Kirikasamma LGA. As more people compete for limited economic opportunities and social services, household incomes have stagnated while the cost of living continues to rise. These conditions have increased vulnerability among residents, particularly women, children, and youths, who are disproportionately affected by limited access to education, healthcare, and employment opportunities. Although national and state-level policies exist to address population growth and its socio-economic implications, their effectiveness at the grassroots level remains uncertain due to inadequate community-specific data. Most existing studies and policy frameworks rely heavily on aggregate national or state-level statistics, which often mask local realities and variations. Consequently, policymakers and development stakeholders lack sufficient empirical evidence to design targeted interventions that address the unique socio-economic challenges faced by indigenous communities in Kirikasamma LGA. The absence of detailed, localized research on the socio-economic impacts of population growth in Kirikasamma LGA therefore constitutes a significant knowledge gap. Without a clear understanding of how

population dynamics influence poverty, employment, agriculture, education, and healthcare at the community level, efforts to promote sustainable development may remain ineffective or poorly targeted. This study seeks to address this gap by systematically examining the socio-economic impacts of population growth among indigenous communities in Kirikasamma LGA, Jigawa State, with the aim of generating evidence-based insights to inform policy formulation and local development planning.

1.3 Research Objectives

The aims of the general objective of this study is to examine the socio-economic impacts of population growth among indigenous communities in Kirikasamma Local Government Area of Jigawa State, Nigeria. Specific Objectives are to:

The specific objectives of the study are to:

1. examine the pattern and trend of population growth over time in Kirikasamma Local Government Area of Jigawa State.

2. Assess the socio-economic impacts of population growth on indigenous communities in Kirikasamma LGA, with particular reference to employment, agriculture, education, healthcare, poverty, and living conditions. This study is significant because it provides empirical evidence on the socio-economic impacts of population growth at the local level, with specific focus on Kirikasamma Local Government Area of Jigawa State. By adopting a localized approach, the study generates context-specific data that reflect the lived realities, needs, and challenges of indigenous communities in the area. Such localized evidence is essential for understanding how population dynamics translate into socio-economic outcomes within rural settings. The findings of this study will be of practical relevance to policymakers, local government authorities, development agencies, and community leaders in Kirikasamma LGA, as they will provide a reliable basis for designing and implementing targeted interventions aimed at managing the socio-economic effects of population growth. In particular, the study will support informed decision-making in critical sectors such as education, healthcare, employment, agriculture, and poverty reduction. Furthermore, the study contributes to the broader academic discourse on population dynamics and socio-economic development in Nigeria by filling an existing gap in localized empirical research. The insights generated may also serve as a reference point for future studies and offer valuable lessons for other rural communities and local government areas experiencing similar population growth challenges.

MATERIALS AND METHODS

The Study Area

Kirikasamma Local Government Area (LGA) is one of the twenty-seven LGAs in Jigawa State, located in northeastern Nigeria. It lies approximately between latitudes 12°25' and 12°55' North and longitudes 10°05' and 10°25' East.



Figure: Map of the Study Area

The LGA shares boundaries with Birniwa LGA to the north, Guri LGA to the south, Auyo and Kafin Hausa LGAs to the west, and Machina LGA of Yobe State to the east. Kirikasamma town serves as the administrative headquarters and functions as the centre for political, economic, and social activities within the area. The LGA covers an estimated land area of about 1,200 square kilometres and comprises several districts and villages, including Madachi, Dole, Majo, Marma, and Zango. The terrain is largely flat to gently undulating, making it suitable for both farming and pastoral activities. Climatically, Kirikasamma LGA experiences a semi-arid tropical climate characterized by distinct wet and dry seasons. The wet season occurs between June and September, while the dry season lasts from October to May and is influenced by Harmattan winds. Average annual rainfall ranges from 500 mm to 800 mm, and temperatures vary between 22°C and 38°C. These conditions support crop cultivation and livestock rearing, which form the backbone of the local economy and influence settlement patterns and socio-economic activities. Kirikasamma Local Government Area lies within the Sudan Savannah ecological zone, characterized by grasslands interspersed with drought-resistant trees such as acacia, baobab, and shea. This vegetation supports both crop farming and livestock grazing, though human activities like farming and fuelwood collection have caused some deforestation. The soils are predominantly sandy-loamy with patches of clay loam, moderately fertile, well-drained, and suitable for crops such as millet, sorghum, maize, and groundnuts. Soil fertility is influenced by seasonal rainfall, traditional farming practices, and risks of erosion from over-cultivation or heavy rains. Geologically, the area is underlain by Precambrian Basement Complex rocks, including granites, gneisses, and migmatites, with alluvial deposits along seasonal rivers enhancing soil fertility. The terrain is generally flat to gently undulating, with minor ridges and depressions facilitating drainage but

occasionally prone to flooding during peak rains. Low relief and semi-arid climate influence agricultural practices, settlement patterns, and water availability. The LGA has a predominantly rural, youthful population concentrated near fertile land and water sources. Land use is mainly agricultural, complemented by livestock rearing, trade, artisanal work, and small-scale agro-processing. Population growth and limited land resources have increased pressure on farmland, soil degradation, and occasional farmer–pastoralist conflicts. Sustainable land management, diversified livelihoods, and improved infrastructure are critical for enhancing socio-economic development in Kirikasamma.

METHODOLOGY

A reconnaissance survey was conducted two weeks prior to the main fieldwork in Kirikasamma Local Government Area (LGA) to gather preliminary information and ensure effective research planning. This initial survey familiarized the researcher with the physical, social, and economic environment of the area, identified potential logistical challenges, and guided the development of appropriate research instruments. Visits to various communities allowed for direct observation of settlement patterns, population distribution, socio-economic activities, and infrastructure. Informal discussions with community leaders and residents provided insights into local perceptions of population growth, its associated challenges, and culturally appropriate approaches to data collection. The reconnaissance confirmed that structured questionnaires, complemented by brief interviews, were suitable and effective. Preliminary findings suggested increasing pressure on farmland, limited employment opportunities, and growing demand for education and healthcare services. The study employed both primary and secondary data sources. Primary data were collected through structured questionnaires administered to 200 adult residents aged 18 years and above across selected wards and communities using a multistage sampling technique. Respondents were selected to ensure geographic, socio-economic, and demographic diversity. Informal interviews and field observations were conducted alongside questionnaires to capture qualitative perspectives. Secondary data were obtained from journals, government reports, policy documents, and publications by the National Population Commission (NPC), UNFPA, World Bank, and African Development Bank (AfDB), providing context and validation for the primary data. Quantitative data were analyzed using descriptive statistics, including frequencies, percentages, tables, and charts, to summarize socio-demographic characteristics, population growth trends, and perceived impacts. In addition, the study calculated Weighted Mean Scores (WMS) and ranks for key socio-economic impacts of population growth, including poverty, unemployment, educational and healthcare inadequacies, housing shortages, rising food prices, land pressure, and insecurity. WMS allowed the study to quantify respondents' perceptions and prioritize the most pressing socio-economic challenges.

Qualitative data from open-ended questions and interviews were analyzed thematically to identify recurring patterns, contextual nuances, and coping strategies adopted by residents. This mixed-methods approach provided both statistical rigor and a nuanced understanding of the causes, trends, and socio-economic consequences of population growth in Kirikasamma LGA. By integrating quantitative and qualitative evidence, the methodology ensured robust and reliable findings that inform both policy formulation and community-level interventions.

RESULTS AND DISCUSSION

DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

Age of the Respondents

The age distribution of respondents (Table 1) provides insights into the socio-economic implications of population growth in Kirikasamma LGA. The youngest adult group, 18–25 years, consists of 35 respondents (17.5 %). This cohort is typically in transition from education to the workforce, forming new households, and beginning to contribute economically. Their relatively small proportion suggests that early adulthood represents a modest share of the adult population in the area (Adebayo, 2021). The largest segment, 26–35 years, includes 80 respondents (40 %) and represents the core working-age population. Individuals in this group are generally employed, actively participate in economic activities, and carry household responsibilities (Okonjo & Adeyemi, 2020). The 36–45 years category accounts for 60 respondents (30 %) and typically comprises more experienced adults supporting both younger dependents and older family members, contributing significantly to socio-economic activities (Abdullahi, 2019). The smallest group, 46 years and above, represents 12.5 % of respondents, reflecting a smaller proportion of older adults who are often less economically active or approaching retirement (NPC, 2020). Overall, 70 % of respondents fall within the 26–45 age range, indicating a substantial working-age population.

Table 1: Distribution of Respondents by Age

Age Group	Frequency	Percentage
18–25 years	35	17.5
26–35 years	80	40
36–45 years	60	30
46 and above	25	12.5
Total	200	100

Source: Field Survey, 2025

Literature suggests that a high proportion of economically active individuals relative to dependents can generate a demographic dividend if accompanied by investment in education, skills, employment, and infrastructure (UNFPA, 2019; World Bank, 2021). Studies in Nigeria highlight that harnessing this potential can positively influence productivity

and GDP per capita (Adeniran & Yusuf, 2020). Conversely, insufficient job creation and inadequate human capital development may turn this advantage into a demographic challenge, creating underemployment and socio-economic strain (Ibrahim & Bello, 2018; AfDB, 2020; Onwuka, 2021). In summary, the age structure of Kirikasamma LGA presents opportunities for socio-economic growth, contingent on effective policy interventions and institutional support.

Gender of the Respondents

The gender distribution of respondents (Table 2) reveals a notable disparity between males and females. Of the total 200 respondents, 161 were male, representing 80.5 %, while only 39 respondents were female, accounting for 19.5 % of the sample (Field Survey, 2025). This skewed ratio reflects a strong male predominance in public and economic activities within the study area, influenced by both cultural and socio-economic factors. In many rural Nigerian communities, men are more visible in agriculture, trade, and local governance, whereas women's participation is often limited by traditional household responsibilities, restricted access to resources, and social norms (Abdullahi, 2019; Okonjo & Adeyemi, 2020). The predominance of male respondents has important implications for understanding the socio-economic impacts of population growth in Kirikasamma LGA. Data are likely to reflect male perspectives on economic participation, labour patterns, and household decision-making. Studies have shown that male-headed households are frequently overrepresented in rural surveys, influencing reported income, access to resources, and perceptions of development challenges (Adeniran & Yusuf, 2020; Ibrahim & Bello, 2018).

Table 2: Distribution of Respondents by Gender

Gender	Frequency	Percentage
Male	161	80.5
Female	31	19.5
Total	200	100

Source: Field Survey, 2025

The low female representation (19.5 %) highlights potential marginalization in socio-economic decision-making, which may affect issues such as family planning, children's education, and intra-household resource allocation (UNFPA, 2019; Onwuka, 2021). Since women often bear primary responsibility for child-rearing and household management, their limited participation may hinder effective responses to the pressures of population growth, including impacts on health, nutrition, and education services (World Bank, 2021). In conclusion, the gender composition in Kirikasamma LGA reflects broader rural Nigerian patterns of male dominance in economic and public life. This imbalance emphasizes the need to consider gender dynamics in evaluating the socio-economic effects of population growth, particularly regarding female inclusion, equitable resource access, and empowerment in decision-making processes (Abdullahi, 2019; UNFPA, 2019).

Marital Status of the Respondents

The marital status distribution of respondents (Table 3) indicates that a majority of adults in Kirikasamma LGA are married. Out of the 200 respondents, 123 individuals (61.5 %) reported being married, 42 respondents (21 %) were single, 23 respondents (11.5 %) were widowed, and 12 respondents (6 %) were divorced or separated.

Table 3: Marital Status of Respondents

Status	Frequency	Percentage
Single	42	21.0
Married	123	61.5
Widowed	23	11.5
Divorced/Separated	12	6.0
Total	200	100

Source: Field Survey, 2025

The predominance of married individuals reflects the societal norm of early and widespread marriage in many rural Nigerian communities (Abdullahi, 2019; Okonjo & Adeyemi, 2020). This demographic pattern has significant socio-economic implications, as married adults are primarily responsible for child-rearing and household management, which directly impacts fertility rates, family size, and household resource allocation (Ibrahim & Bello, 2018; UNFPA, 2019). A high proportion of married respondents suggests potential for continued population growth, with increasing demands for education, healthcare, and other social services. Widowed (11.5 %) and divorced/separated respondents (6 %) offer additional insight into community dynamics. These individuals, particularly women, may face socio-economic challenges such as reduced income, heightened vulnerability to poverty, and limited access to productive resources (Adeniran & Yusuf, 2020; Onwuka, 2021). Meanwhile, single respondents (21 %) typically include younger adults who may still be dependent on family support or transitioning into the workforce, influencing labor availability and economic contributions to households (World Bank, 2021). Overall, the marital status composition of Kirikasamma LGA underscores the predominance of marriage as a social institution, with direct implications for population growth, household formation, and socio-economic planning. Understanding these patterns provides a foundation for designing interventions that address fertility, resource allocation, and community development in rural Nigerian contexts (Abdullahi, 2019; UNFPA, 2019).

Educational Level of Respondents

The educational attainment of respondents in Kirikasamma LGA (Table 4) reveals that a majority of the population has limited formal education. Out of 200 respondents, 120 individuals (60 %) reported having no formal education, 25 respondents (12.5 %) completed primary education, 35 respondents (16.5 %) attained secondary education, and only 18 respondents (9 %) had tertiary education (Field Survey,

2025). This distribution indicates a predominance of low educational attainment in the area, reflecting broader trends in rural northern Nigeria, where access to schooling is often hindered by economic constraints, cultural norms, and inadequate infrastructure (Abdullahi, 2019; Okonjo & Adeyemi, 2020).

Table 4: Educational Level of Respondents

Education Level	Frequency	Percentage
No formal education	120	60.0
Primary	25	12.5
Secondary	35	16.5
Tertiary	18	9.0
Total	200	100

Source: Field Survey, 2025

The high proportion of respondents without formal education has notable socio-economic implications. Limited literacy is associated with lower awareness of family planning, reduced labor productivity, and restricted opportunities for socio-economic advancement (Ibrahim & Bello, 2018; UNFPA, 2019). Furthermore, individuals with minimal formal education may face challenges in accessing information on healthcare, agriculture, and entrepreneurial activities, thereby exacerbating the adverse effects of rapid population growth (Adeniran & Yusuf, 2020). Respondents with primary (12.5 %) and secondary (16.5 %) education levels may possess moderate capacity to engage in basic income-generating activities, utilize essential health services, and participate in community decision-making, yet their skills remain insufficient for higher-skilled employment (Onwuka, 2021; World Bank, 2021). The relatively small segment with tertiary education (9 %) represents the limited pool of individuals qualified for professional or managerial roles, which could otherwise contribute to local development and policy planning. Overall, the educational profile of Kirikasamma LGA underscores the critical need for literacy and educational interventions as part of sustainable development strategies. Enhancing access to formal education is essential for empowering the community to manage the socio-economic pressures of population growth effectively (Abdullahi, 2019; UNFPA, 2019).

Occupation of Respondents

The occupational distribution of respondents (Table 5) highlights the predominance of agriculture as the principal economic activity in Kirikasamma LGA. Among the 200 respondents, 135 individuals (67.5 %) were engaged in farming, 27 respondents (13.5 %) were involved in trading, 15 respondents (7.5 %) were civil servants, 11 respondents (5.5 %) were artisans, and 12 respondents (6 %) were unemployed.

Table 5: Occupation of Respondents

Occupation	Frequency	Percentage
Farming	135	67.5
Trading	27	13.5

Civil Servant	15	7.5
Artisan	11	5.5
Unemployed	12	6.0
Total	200	100

Source: Field Survey, 2025

This distribution reflects the agrarian character of the local economy, where the majority of households rely on farming for livelihood and income, consistent with patterns observed in other rural communities in northern Nigeria (Abdullahi, 2019; Okonjo & Adeyemi, 2020). The dominance of agriculture carries significant socio-economic implications in the context of population growth. With a large proportion of the population dependent on farming, household income and food security are closely linked to land availability, climate conditions, and agricultural productivity. Rapid population growth can increase pressure on land, leading to fragmentation, declining yields, and intensified competition for arable farmland (Ibrahim & Bello, 2018; UNFPA, 2019). Trading (13.5 %) contributes to local commerce, providing supplementary income and supporting market activities, while civil servants (7.5 %) represent relatively stable formal employment with access to social services. Artisans (5.5 %) supply critical skills such as carpentry, tailoring, and mechanical work, whereas the unemployed (6 %) are vulnerable to poverty and rely on family support or informal economic engagements (Adeniran & Yusuf, 2020; Onwuka, 2021). Overall, the occupational profile of Kirikasamma LGA underscores the community's heavy reliance on agriculture, limited diversification into formal employment, and constrained access to skilled trades. This dependency highlights the socio-economic pressures of population growth, emphasizing the need for policies that enhance agricultural productivity, develop vocational skills, and promote alternative income-generating activities to sustain livelihoods and reduce resource competition (World Bank, 2021; UNFPA, 2019).

Pattern and trend of population growth over time in Kirikasamma Local Government Area of Jigawa State.

Figure 2 illustrates population growth over a fifty-year period from 1975 to 2025, with the x-axis representing the year and the y-axis representing population size. Data points for specific years are connected with a line, showing the overall trend of population changes over time.

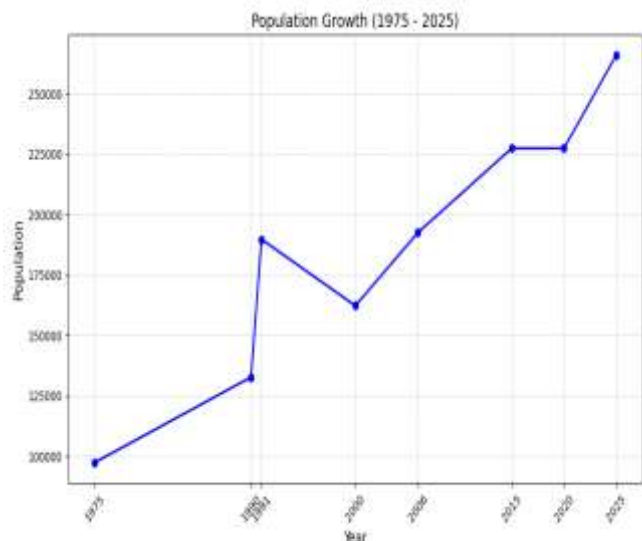


Figure 2: Pattern and trend of population growth over time in the study area

Between 1975 and 1990, the population increased steadily from 97,449 to 132,797, indicating gradual growth over fifteen years. This steady increase may have been influenced by improvements in healthcare, nutrition, or local economic conditions that allowed for higher survival rates. However, between 1990 and 1991, there was a sharp spike in population from 132,797 to 189,778. Such a sudden increase could suggest a data correction or census adjustment rather than natural growth, or it may reflect migration inflows or changes in population counting methods. From 1991 to 2000, the population decreased slightly to 162,320, which is unusual and could indicate out-migration, mortality events such as disease outbreaks, famine, or conflict, or possibly an underestimation in data collection. Between 2000 and 2006, the population rose again to 192,583, signaling a recovery phase and a return to moderate growth. Growth continued steadily from 2006 to 2015, reaching 227,464, reflecting a general upward trend likely consistent with improving living conditions and fertility patterns. Between 2015 and 2020, the population remained stagnant at 227,464, suggesting a plateau effect, which could be attributed to migration, policy impacts, or reduced birth rates, or it may reflect estimation rather than actual census data. From 2020 to 2025, the population is projected to rise to 265,900, indicating renewed growth likely based on expected natural increase or projections from past trends. Overall, the population nearly tripled between 1975 and 2025, demonstrating significant growth over fifty years. Despite this long-term increase, the population exhibits irregular fluctuations, particularly in 1991 and during the plateau around 2020, which may be influenced by census anomalies, migration, or socio-political factors. The growth can be categorized into phases: slow growth from 1975 to 1990, a sudden surge in 1990–1991, a decline and recovery between 1991 and 2006, steady growth from 2006 to 2015, a plateau from 2015 to 2020, and a projected increase from 2020 to

2025. These trends have important implications for urban planning, as population spikes and projected growth highlight the need for improved infrastructure, healthcare, and housing. Policy planning should also address periods of stagnation or decline by investigating demographic challenges such as migration, fertility rates, and mortality. Understanding these population trends is vital for sustainable development, particularly for effective resource allocation, education planning, and environmental management. In conclusion, the graph demonstrates that while the population shows a long-term increasing trend, it is not linear. Historical events, census accuracy, and socio-economic factors have likely influenced fluctuations. The projected population for 2025 emphasizes the need for planning to accommodate a larger population in the coming years.

Perceived Impact of Population Growth

The analysis in Table 6 highlights several socio-economic impacts of population growth as perceived by respondents in Kirikasamma Local Government Area. The findings reveal that **IP** - increased poverty is the most pressing concern, with 72% strongly agreeing and 20% agreeing that it is a major consequence, resulting in the highest weighted mean score (WMS) of 3.61. This demonstrates a strong consensus among respondents that poverty is a critical outcome of population growth. Poverty reduces household capacity to provide adequate food, education, and healthcare, thereby creating a cycle of deprivation (World Bank, 2021; Onwuka, 2021). The prominence of poverty in the ranking underscores the need for targeted interventions aimed at income generation, social protection, and livelihood diversification to alleviate economic hardship. Closely following poverty, respondents identified **IEF**-inadequate educational facilities as a significant impact (WMS = 3.48, Rank 2nd), with 64% strongly agreeing and 25% agreeing. Limited school infrastructure, insufficient classrooms, inadequate teaching materials, and shortages of trained teachers constrain access to quality education. Poor educational facilities may exacerbate school dropout rates, especially among girls, and limit human capital development, which is essential for sustainable community growth (UNFPA, 2019; Okonjo & Adeyemi, 2020).

Table 6 Impact of Population Growth by Respondents

Impacts	Strongly Agree	Agree	Disagree	Strongly Disagree	WMS	Rank
PLF	90 (45.0%)	85 (42.5%)	15 (7.5%)	10 (5.0%)	3.28	8 th
IUNEM	135(67.5%)	35 (17.5%)	20 (10.0%)	10 (5.0%)	3.48	3 rd
IP	144 (72.0%)	40 (20.0%)	10 (5.0%)	6 (3.0%)	3.61	1 st
IHC	130 (65.5%)	45 (22.5%)	15 (7.5%)	10 (5.0%)	3.48	3 rd
IEF	128 (64.0%)	50 (25.0%)	12 (6.0%)	10 (5.0%)	3.48	2 nd

IH/A	125 (62.5%)	48 (24.0%)	17 (8.5%)	10 (5.0%)	3.44	5th
RFP	130 (65.0%)	35 (17.5%)	25 (12.5%)	10 (5.0%)	3.43	6th
RI/C	120 (60.0%)	55 (27.5%)	15 (7.5%)	10 (5.0%)	3.43	6th

Source: Field Survey, 2025

IUNEM-Unemployment also emerged as a major concern (WMS = 3.48, Rank 3rd), with 67.5% strongly agreeing. Respondents perceive that population growth contributes to rising unemployment by increasing the labor force faster than available job opportunities. This aligns with existing studies indicating that without adequate economic diversification and job creation, a rapidly growing working-age population is prone to underemployment and youth unemployment (Adeniran & Yusuf, 2020; UNFPA, 2019). **IHC**-Inadequate healthcare received an identical WMS of 3.48, reflecting that 65.5% strongly agreed it is a key impact. Population growth places pressure on local clinics and health facilities, resulting in poor maternal and child health, higher disease prevalence, and low life expectancy, which collectively hinder sustainable development (UNFPA, 2019). The close ranking with unemployment emphasizes the interconnectedness of health and economic well-being. **IH/A** -Housing and accommodation challenges were reported by 62.5% strongly agreeing and 24% agreeing (WMS = 3.44, Rank 5th). Rapid population growth increases the demand for shelter, often leading to overcrowding, informal settlements, and substandard living conditions. Such pressures negatively affect public health, social stability, and quality of life (AfDB, 2020). **RFP** -Rising food prices (WMS = 3.43, Rank 6th) were strongly agreed upon by 65% of respondents. Inflation in food costs is often linked to population pressure on local food supply, which reduces household purchasing power, worsens nutritional outcomes, and reinforces poverty (Ibrahim & Bello, 2018). **RI/C** -Insecurity and crime were also highlighted (WMS = 3.43, Rank 6th), with 60% strongly agreeing. Rapid population growth can strain social control mechanisms and resources, contributing to higher crime rates and insecurity. This aligns with findings that population pressure in rural Nigerian communities is associated with social instability and resource-based conflicts (Ibrahim & Bello, 2018; AfDB, 2020). Finally, **PLF** -pressure on land for farming received the lowest WMS of 3.28 (Rank 8th), with 45% strongly agreeing and 42.5% agreeing. While still significant, respondents perceive land pressure as less immediate compared to economic and infrastructural challenges. This is consistent with studies showing that rapid population growth often leads to land fragmentation, overutilization, and reduced agricultural productivity (Abdullahi, 2019; Ibrahim & Bello, 2018). The weighted mean scores and rankings indicate that economic factors (poverty, unemployment) and infrastructure deficits (educational and healthcare facilities) are the most pressing impacts of population growth in Kirikasamma LGA. Socio-economic challenges such as housing, food prices, and

insecurity follow, while environmental pressures on land are perceived as relatively less urgent. The findings are consistent with broader literature on rural Nigeria, which highlights the socio-economic strains of high population growth on communities with limited resources and infrastructural capacity (Abdullahi, 2019; UNFPA, 2019; World Bank, 2021). Interventions should prioritize poverty alleviation, job creation, education, healthcare improvement, and food security, as these areas have the greatest potential to mitigate cascading socio-economic impacts of population growth.

CONCLUSION

The study has demonstrated that population growth in Kirikasamma Local Government Area of Jigawa State has significant socio-economic implications for indigenous communities. Over the fifty-year period analyzed, the population has increased substantially, creating pressures on employment, agriculture, education, healthcare, housing, and overall living conditions. The majority of the population is within the working-age group, yet limited job opportunities and overreliance on agriculture constrain economic productivity. High poverty levels, inadequate educational and healthcare facilities, rising food prices, and housing challenges reflect the multidimensional strain of rapid population growth on community livelihoods. Furthermore, social vulnerabilities are exacerbated for women, children, and the elderly due to unequal access to resources and socio-economic opportunities. The irregularities in population trends, including sudden spikes and periods of stagnation, suggest additional challenges linked to migration, policy implementation, and census accuracy. Overall, while population growth presents potential opportunities for labor force expansion and economic development, the current socio-economic conditions in Kirikasamma LGA indicate that these opportunities are largely untapped and overshadowed by developmental pressures.

RECOMMENDATIONS

Based on the findings, the study recommends the following measures to mitigate the socio-economic impacts of population growth in Kirikasamma LGA:

1. Poverty Alleviation and Livelihood Diversification: Local authorities and development agencies should implement programs that promote income-generating activities beyond subsistence agriculture, including vocational training, small-scale entrepreneurship, and agro-processing initiatives.
2. Education Improvement: Expansion of educational infrastructure, recruitment of qualified teachers, provision of learning materials, and promotion of female education are essential to improve literacy, human capital development, and long-term socio-economic resilience.
3. Healthcare Enhancement: Investment in healthcare facilities, increased staffing, and community-based health education programs are necessary to address the strain on

medical services and improve maternal and child health outcomes.

4. Employment Creation: Policies aimed at stimulating local economies, such as agro-industrial development, trade facilitation, and skills-based employment programs, will help absorb the growing labor force and reduce unemployment. 5. Sustainable Agricultural Practices: Adoption of modern farming techniques, access to credit facilities, and effective land management strategies can increase agricultural productivity, mitigate land fragmentation, and enhance food security.

6. Infrastructure and Housing Development: Provision of adequate housing, sanitation, and social amenities is necessary to accommodate population growth and improve quality of life.

7. Policy and Planning Interventions: Local and state governments should incorporate population dynamics into development planning, ensuring that policies reflect community-specific needs and promote sustainable resource allocation.

8. Gender Inclusion: Empowering women through access to education, healthcare, and economic opportunities will enhance household decision-making, family welfare, and community resilience against population pressures. In conclusion, addressing the socio-economic impacts of population growth in Kirikasamma LGA requires a holistic approach that integrates poverty reduction, human capital development, infrastructure improvement, and sustainable resource management. Effective implementation of these recommendations will not only mitigate the negative consequences of population growth but also harness its potential as a driver of sustainable development.

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