

# Rural Insecurity and Urbanization: Empirical Evidence from Port Harcourt, Rivers State, Nigeria

ADIBE Nkeiruka Okwakpam and OHOCHUKU, Chinwennwo Phillips

Department of Architecture,  
Faculty of Environment Sciences,  
Rivers State University, Port Harcourt, Nigeria

---

## Abstract

*Rural insecurity is a decussating and multi-dimensional concept that has been subject to debate. Insecurity is viewed differently by different researchers, some associating it with how it affects individual lives and existence. Urbanization is often defined as the transformation process from rural population to the urban population. Increasing insecurity in rural communities has been a threat to inhabitants of rural communities. The study examined the impact of rural insecurity on urbanization in Port Harcourt, Rivers state. Data were sourced from a self-administered questionnaire to employees of the ministry of urban development and physical planning, the department of housing development Obio/Akpor and Port Harcourt City Local Government Areas, and private housing developers. Simple percentages, mean, and standard deviation were used to analyze the respondent's views. The study found that rural insecurity affects urbanization in Rivers State. The study recommends the need for effective leadership and good governance which can ensure political stability in Rivers state to ensure an end to rural insecurity to guarantee the safety of life and properties of rural inhabitants.*

---

**Keywords:** Rural Insecurity, Urbanization, Port Harcourt, Rivers State, Nigeria

---

## INTRODUCTION

The experience of insecurity in rural communities in Rivers State is not palatable by all standards. Several issues have been identified in fueling insecurity which includes; lack of equality and justice; poor economy; high level of unemployment; religious and ethnic crises; and political instability. Rural insecurity increases the rate of rural-urban migration. Okopi (2021) opined that the armed insurgency of the Niger Delta youths resulted in the deterioration of law and order in the region, especially in the rural communities, triggering a massive migration out of the rural communities, and into the urban centers of the region. This massive rural-urban migration is further enhanced by the environmental degradation, caused by oil exploration and exploitation activities that made the sustenance of the predominant occupations in the rural communities almost impossible (Okopi, 2021).

The metro area population of Port Harcourt in 2022 is 3,325,000, a 4.86% increase from 2021. The metro area population of Port Harcourt in 2021 was 3,171,000, a 5% increase from 2020. The metro area population of Port Harcourt in 2020 was 3,020,000, a 5.12% increase from 2019. This massive migration into the urban centers, for safety and economic reasons, resulted in a

significant increase in the population of the urban in Rivers State. Most of this urbanization is horizontal and involves the conversion of agricultural lands into residential accommodation, which affects negatively food production in the state.

The security crises in rural communities are destroying existing infrastructure and preventing a peaceful environment for the development of further infrastructure, and a safe environment for economic activities by individuals to give them economic empowerment that will enable households not only to cater to their present generations, but create wealth, but also to provide for future generations by increasing rural-urban migration. The uncontrollable urbanization coupled with the rate of urban growth in Rivers state remains a major challenge for urban environmental sustainability. The urbanization and substantial evolution of Rivers State and environs, has played an advanced central role in its expansion process of civilization beyond its juridical limits and into their peripheries to accommodate the most populous urban growing Rivers State. This has resulted in a fundamental change in the way society has embraced modernization, with urbanization generally perceived to provide opportunities for improved facilities associated with the economic, social, health (or welfare), physical landscape, and cultural requirements of urban inhabitants (Okopi, 2021).

Sustainable urbanization encompasses the development of urban economies, and social and political systems (DFID, 2002 as cited in (Maigari, 1998). The urbanization, process is responsible for cities' growth and towns' development which has its predicament for the society (Maigari, 2014). Urbanization is an extensive development of infrastructure, job creation, and economic expansion, responsible for massive growth in the urban population which is the movement of people rural-to-urban migration (Mortimore and Tiffen, 1995).

Oluwatayo and Opoko (2014) opted for urbanization as urban expansion/extensions and the transformation of rural communities into urban settlements. Urbanization is the densification and outward spread of the built environment (Maiwada, 2014). The provision of public infrastructure and services in neighborhood settlements remained unsatisfactory (Maiwada, 1995). It is argued that urbanization is crucial to the process of development, as it creates a modern state (Kano State Urban Development Board, 1980) but also provides opportunities for reducing urban poverty and promoting sustainable development, encouraging family planning and smaller family sizes. Urbanization improves the standard of living, increases life expectancy, and provides huge employment opportunities. This urban growth has effects on the number and complexity of human activities, which have necessitated a critical assessment of the city landscape and hinterland

However, Okopi (2021) noted that urbanization can also pose major threats to the achievement of sustainable development, due to detrimental environmental impacts and other adverse effects associated with intensive resource consumption and poor management (Olofin & Tanko, 2002). It is often argued that whilst urbanization on one hand helps create economic wealth for the nation and rising income of living standards for the urban populace, it also results in tremendous strain on the city's infrastructure and contributes to problems associated with urban sprawl. Port Harcourt like other cities in Nigeria has encountered huge urbanization challenges, ranging from rapid population growth, overcrowding, the proliferation of slums, increasing vehicular and

industrial pollution, overused urban facilities, and urban poverty, resulting in various environmental, economic, and cultural issues.

Urbanization has impacted significant changes in uncontrolled and unplanned cities, slums, environmental decay, overcrowding, housing congestion, (Ikudayisi & Adegbehingbe, 2017) crime and violence, and other detrimental problems. Empirical findings over the years revealed a challenging scenario of rapid loss in green areas due to pressure from intense human activities. Carruthers (2002) opined that urbanization has been responsible for a variety of problems such as extreme crime rates, unemployment, high poverty rate, slums, insecurity, and environmental degradation. This study was motivated to examine the effect of rural insecurity on urbanization in Port Harcourt, Rivers State.

### **Objectives of the Study**

The general purpose of the study is to study the impact of rural insecurity on urbanization in Port Harcourt, Rivers State while the specific objectives are to:

1. Examine the impact of rural insecurity on the increasing urban population in Port Harcourt, Rivers State
2. Evaluate the impact of rural insecurity on urban sprawl in Port Harcourt, Rivers State

### **Research Questions**

1. How does rural insecurity impact the increasing urban population in Port Harcourt, Rivers State?
2. To what extent does rural insecurity impact urban sprawl in Port Harcourt, Rivers State?

## **REVIEW OF RELATED LITERATURE**

### **Rural Insecurity**

The concept of rural insecurity connotes different meanings such as the absence of safety; danger; hazard; uncertainty; lack of protection, and lack of safety. Beland (2005) rural insecurity is a state of fear or anxiety stemming from concrete or alleged lack of protection in rural communities. It refers to a lack of or inadequate freedom from danger. Achumba et al (2013) define insecurity from two perspectives. Rural insecurity is the state of being open or subject to danger or threat of danger, where danger is the condition of being susceptible to harm or injury in rural communities. Rural insecurity is the state of being exposed to risk or anxiety, where anxiety is a vague unpleasant emotion that is experienced in anticipation of some misfortune in rural communities. These definitions of rural insecurity underscore a major point that those affected by insecurity are not only uncertain or unaware of what would happen but they are also vulnerable to the threats and dangers when they occur.

Rural insecurity is a crosscutting and multi-dimensional concept that has been subject to debate. Insecurity is viewed differently by different researchers, some associating it with how it affects individual lives and existence. UNDP (1994) saw human security to include chronic threats like hunger, disease, and repression. The state of fear or anxiety stemming from concrete or alleged lack of protection or inadequate freedom from danger is seen as insecurity (Beland, 2005;

Achumba, Ighomeroho, and Akpor-Robaro, 2013). Achumba et.al., (2013) opined that insecurity is a state of being subject to danger, exposed to risk, or anxiety. A person or thing is said to be secured when not being exposed to any form of danger or risk of physical or moral aggression, accident, theft, or deterioration (Eme and Anyadike, 2013). Rural insecurity is seen as a chronic threat to human life, territories, states, religious beliefs, properties, and institutions among others to inhabitants of rural communities.

### **Urbanization**

Urbanization is often defined as the transformation process from rural population to the urban population. Sun Yongzheng (2001) opined forward that urbanization includes the transformation of the rural population into the urban population, as well as the upgrading of industrial structure, improvement of urban construction, and enhancement of urban management. Usually, urbanization is supposed to be a source of economic advantages to the country. For instance, urbanization brings about the formation of large markets at specific locations which promotes productivity; inter-firm linkages, and employment of labour. From the social perspective, urbanization favors socialization, access to education and new technologies, and the provision of social infrastructures that boost development and alleviate poverty. Urbanization also facilitates globalization through the international transactions that ensue among countries from the economic advantages and the geopolitical weight that build up in the urban settings. Therefore, urbanization is a socioeconomic phenomenon that any country could wish for because it's transformative, informative, and a reliable agent of economic development

### **Insecurity and Urbanization**

Insecurity leads to rural-urban migration, globally, the nexus between migration and development has remained an issue under vigorous academic debate (Unah, 2019a). the process of people migrating to other areas in search of a better life is not a novel one. What has however gained currency is the increasing voluntary movement in the quest for a better quality of life by low-skill and low-wage workers as well as high-skill and high-wage workers from less-developed rural areas to more developed urban areas, especially among the poor in the developing countries (Unah & Muktar, 2020).

Rural-urban migration results from the search for perceived or real opportunities as a consequence of rural-urban inequality in wealth (Unah, 2020b), this inequality and/or urban bias in development according to research findings over the years results from the overwhelming concentration of wealth, assets, purchasing capacity, economic activities, and variety of services in the urban centers as well as the continued neglect and degradation of rural environments or areas.

Migration has also been identified as a survival strategy utilized by the poor, especially the rural dwellers. The assessment of the effects of migration on rural areas has remained relevant since migration acts as a catalyst in the transformation process of not only the destiny of individual migrants but also the conditions of family members left behind, local communities, and the wider sending regions. One significant source of development for the rural populace as a result of this increasing drift towards the cities is remittances (Oluwatayo & Opoko, 2014). Migrants'

remittances and the income multipliers they create are becoming critical resources for the sustenance strategies of receiving households as well as agents of regional and national development. Households that receive these remittances tend to use the proceeds primarily for current consumption (food, clothing) as well as investments in children's education, health care, improvement in household food and security, and water and sanitation. Nevertheless, the ability of remittances to compensate for the labor shortage in rural areas is still a function of the amounts and value of remittances received by migrants' households at home, especially in developing countries (Ogunsola, 2016).

Consequently, the effects of rural-urban migration in the rural places of origin of migrants may be manifest in two ways. First, the rural-urban migrants send remittances to their relatives in the rural areas and these remittance-receiving households use the remittances for various purposes. Secondly, these rural-urban migrants execute various rural development projects in their rural areas of origin (Morelli, 2011). In Nigeria, most migrants coming from a particular rural community to live in an urban area usually form rural community associations in the urban area. These community associations in the urban areas articulate, from time to time, the developmental needs of their rural communities of origin and contribute resources to execute projects such as road construction and the award of educational scholarships to students in the rural areas.

A combination of these rural community projects executed by the rural-urban migrants and the uses of remittances by rural remittance-receiving households serve as indicators of the effects of rural-urban migration on the population concerned. In this regard, and tandem with contemporary praxis, the paradigm shift in the meaning of development emphasizes personal satisfaction consequent on improvement in the quality of life of the "individual" and/or "population" involved in the developmental process (Maigari, 2014). Accordingly, each population ranks community development projects and uses of remittances in the order of importance they believe will ensure their satisfaction and happiness. It is also the existence of these projects and the uses of remittances derivable from the migration process that reflect the level of socioeconomic development that can be traceable to rural-urban migration (Idowu, 2013). The combination of these projects by migrants and the various uses of remittances in the past three years, according to the respondents, is what they see as indicators of development in their rural communities.

Rural out-migration is important; this is because the mass exodus of people from the overpopulated areas has been one of the most spectacular phenomena of the 20<sup>th</sup> century in Nigeria. Studies on migration in Nigeria include an assessment of changes in urban-rural ties from 1961 to 1987 (Gambo, 2014). Also, another study in Anambra state found that many Igbo families encouraged their family members to migrate because of the belief that their continued stay in the village will not bring financial success.

From the review of the literature, it is clear that most of the rural-urban migration studies done in Nigeria virtually excluded the effects of these rural-urban migrations on the rural sending communities and are in most cases sample surveys on characteristics and determinants of migration. There is, therefore, a need for studies that will determine the effects of rural-urban

migration on rural communities in developing countries, especially in Nigeria where rural-urban migration has been on the increase in recent times (Enoguanbhor, et al., 2019). The estimation of the effects of rural-urban migration on the rural communities will aid policy interventions by governments and development agencies in their quest to facilitate the development of these rural communities.

### **Challenge of Urbanization in Nigeria**

Urbanization is generally regarded as the transformation of areas with rural character into towns. It is, in other words, the growth of towns from their hitherto statuses of rural settings. In an ideal and orthodox setting, such processes of urbanization should usually come along with industrialization through the establishment of factories and the expansion of employment opportunities, which ideally should, however, produce a thriving industrial town. The obvious relationship between urbanization and industrialization is the nexus of labor attraction not only in the commercial and manufacturing activities but more importantly in agricultural production.

Thus, as the conditions of opportunities expand in the urban areas, they, however, dialectically worsen in the rural areas as people are continuously attracted to the urban areas where they are dangerously forced to abandon rural life to seek a means of frivolous livelihood in the towns. The rural residents see the attractiveness of the towns with seeming better opportunities. But in actual reality, many people abandon rural life in preference for the crowded and often substandard, squalor and shanty housing in the towns where they cannot find suitable employment opportunities (Gadd, 1976). What provokes such rural residents to uproot their places for such urban life can be better appreciated in policy analysis.

The Nigerian population has continued to steadily grow from about 20 million in 1931 to 32 million in 1952/53 and some 56 million in 1963. However, the 1973 census was canceled due largely to its political content and agitation for its cancellation. The 1991 census put the Nigerian population at more than 88 million. Currently, Nigeria is more than 150 million inhabitants (Nigeria, Population censuses) with large urban centers. While most of the urban centers are in great disarray with vast slumps, Nigeria's great majority of urban workers live with inadequate facilities. One, therefore, wonders whether these sectors, characterized by squalor features are indeed within the Nigerian urban area planning. These areas consist, inter alia, of poor roads, lack of water supply, poor sanitary conditions and in most cases, without electricity supply.

Other grave problems bordering on social issues faced by urban Nigerians include inadequate job opportunities which give rise to the growing incidence of insecurity; resulting from crimes, theft, housebreaking, and armed robbery as the only attractive options left to those who cannot legitimately make ends meet to sustain themselves. However, even those legitimately employed engage in intense fraudulent activities because the condition has forced them to find that crime is necessary so that they may continue to afford to live in the high priced urban areas (Adedeji & Rowland, 1973)

The challenge of urbanization is, without dispute, the challenge of the future. A practical solution to the challenge of urbanization is, on the other side of the coin, the empirical solution to the rural problems. It has been explicitly shown that the problems of urbanization are the problems of the young on whom the future progress of our country depends. It is the youth who are rejecting rural life for the attractions of the urban areas. It is the youth who arrive with high hopes in the urban areas for a better way of life. It is the youth who are most greatly disillusioned when no jobs, no housing, inadequate services, and all too few prospects for a better way of life, await them in the town. It is in our youth that the crisis of expectations is at the highest and the disappointment and frustrations will be most heavily felt. And it is the youth whose morals are put at the greatest risk. In failing our youth we fail ourselves and our country (Adedeji and Rowland, 1973).

The challenge of urbanization intrinsically challenges the rural question as the dual settlement patterns are the two sides of the same coin which neither the rural nor the urban can be divorced from each other. Thus, any design to transform one area without the corresponding and relative attempt to improve the other is likely to produce undesired results. Whenever attempts are made to improve urban areas alone that in themselves will cause some movements of people from the rural areas.

Put differently, any design and strategy to improve the urban condition must therefore correspond with similar or relative design and strategy to improve the rural situation. To stamp out the prevalence of rural-urban migration, a relative and proportionate 'balance' in the design and strategy of rural and urban development must be made and enforced within the entire development plan. The urbanization process in Nigeria has continued to increase with rapidly growing problems in all parts of the country. As the pace of urbanization has indicated that with 54 towns in 1952 whose total inhabitants was 3.1 million, each town with a population of 20,000 and above, the growth shows that by 1963 the population jumped to 10.7 million and the number of towns of such size rose to 183. During the same period, however, the percentage of Nigerians living in towns (20,000 and above) was 19 but if 5,000 and above was by 1963 regarded as being an urban then about 55 percent of Nigerians could be considered urbanized (Adedeji and Rowland, 1973).

Such rapid growth of urbanization in Nigeria has its inherent negative implications in social, environmental, economic, political, and other dimensions. While the social implications of congestion and over-crowding are obvious or certain, the inadequacy of all sorts of services cannot be ruled out. Such urban setting inevitably brews incidence of violence, robbery, and social vices like prostitution. The conglomeration of people from diverse ethnic and cultural groups also brings about struggles and conflict between them in the political or even economic arena, which raises tensions between the interest parties. The challenge of urbanization is immense and critical to both the government and the people. To overlook problems associated with the accelerated pace of urbanization will ultimately accept the worsening condition of the rural areas when mass drift from the traditional rural environment goes on unabated to the urban

areas. The failure of the government to halt these trends of mass movement of people to overcrowd the urban areas with other associated implications is catastrophic.

### METHODOLOGY

The structured questionnaire was adopted as the primary data instrument and a total of 400 respondents were targeted for inclusion in the study, this comprises employees of Rivers State Ministry of Urban and physical planning, department of works Obio/Akpor, and Port Harcourt City Local Government Areas and Private housing devilmnt agencies. However, as a result of various unexpected contingencies, only 241 questionnaire copies were successfully retrieved and utilized in the study. This reduction and shortage are attributed to the absence and failure of some of the respondents to complete their copies of the questionnaire. Furthermore, after retrieval, questionnaire copies were treated for errors and missing values, and results revealed 7 questionnaire errors due to missing values which were thereafter treated through the allocation of mode values to the blank sections. The instrument for data collection was a self-structure questionnaire tagged. The instrument was designed and patterned after a modified 4-point rating scale of agreement. The instrument was subjected to face and content validity by two research experts Rivers State University. To establish the reliability of the instrument, the test-retest method was used. The Pearson's Product Moment Correlation Coefficient computation yielded a correlation coefficient of 0.86.

### ANALYSIS AND DISCUSSION

**Table 1: Impact of rural insecurity on increasing urban population in Port Harcourt, Rivers State**

S/N	Impact of rural insecurity on increasing urban population	SD	D	A	SA	$\bar{X}$	STD	Remark
1	Rural insecurity increases the rate of rural-urban migration	98	55	64	17	3.00	.998	Sig
2	Urbanization evolution of Rivers State and environs has played an advanced central role in its expansion process of civilization	82	95	13	44	2.92	1.182	Sig
3	The process of people migrating to other areas in search of a better life is not a novel one	104	61	48	21	3.05	.704	Sig
4	One significant source of development for the rural populace as a result of this increasing drift towards the cities is remittances.	83	95	19	37	3.12	.835	Sig
5	Migrants and the various uses of remittances in the past three years, according to the respondents, are what they see as indicators of development in their rural communities.	94	83	33	24	3.06	.914	Sig

**Table 2: Impact of rural insecurity on urban Sprawl in Port Harcourt, Rivers State**

S/N	Impact of rural insecurity on Urban Sprawl	SD	D	A	SA	$\bar{X}$	STD	Remark
1	urbanization involves the conversion of agricultural lands into residential accommodation	50	44	92	48	2.41	2.101	Not Sig

2	Rural-Urban migration affects housing development as a result of this increasing drift towards the cities is remittances	65	77	43	49	2.68	1.140	Sig
3	Community associations in the urban areas articulate the developmental needs of their rural communities but are negatively affected by insecurity	87	56	53	38	2.82	1.982	Sig
4	Rural insecurity is a threat to community projects	59	66	63	46	2.59	1.947	Sig
5	The mass exodus of people from the overpopulated areas has been one of the most spectacular phenomena in Port Harcourt	63	57	38	76	2.46	2.004	Not Sig

Source: Field Data, 2022

### Discussion of Findings

The results of respondents presented in Tables 1 and 2 show that the items have a high mean and standard low. This proved that the respondents opined to the positive statement on the impact of rural insecurity on the urbanization in Port Harcourt Rivers State. The implication of the findings above shows that insecurity has an increasing impact on rural-urban migration. The findings of the study confirm the findings of Nwanegbo and Odigbo (2013) noted that security avails the opportunity for the development of a nation. Ewetan and Urhie (2014) noted that insecurity hinders business activities and discourages foreign and local investors. Adegbanmi (2013) in his study opined that insecurity is detrimental to the general well-being of the people, and has led to the destruction of businesses and properties, and the relocation of industries. Udeh and Ihezue (2013) also noted that insecurity challenges Nigeria's effort toward national economic development and consequently its vision 20:2020, and scares the attraction of foreign investment and their contributions to economic development in Nigeria. The finding is in line with the opinions () that challenges of urbanization inevitably challenge the rural question. Thus, as urban settlements and associated problems expand, rural conditions correspondingly worsen since urban areas pull out rural residents to migrate for the seeming better opportunities. With the state policies provoking the rural ties to uproot their places, they no doubt raise the problems of security in both the rural settlements in all their manifestations. It must be stressed that any design and strategy to improve the urban condition must correspond with a similar design and strategy to improve the rural areas to stamp out the prevalence of rural-urban migration. In other words, tackling the issue of sustainable development, and infrastructural distributions are crucial in ameliorating the urban drift.

### Conclusion

Insecurity occasioned by the activities of militants, kidnappers, and violent armed robbers in the Rivers State can housing development in the rural communities and increase Rural-Urban migration in Rivers State if not tackled or checked by the government. This study focused on the impact of insecurity on the urbanization in Port Harcourt Rivers State. This can be done by the government proving effective leadership and good governance, ensuring well-equipped and coordinated security, and enhancing intelligence gathering mechanism through synergy between

Nigeria and the international community in the rural communities. Besides, equitable distribution of state resources and egalitarian society is essential or germane to achieving development plans.

### **Recommendation**

- i. There is a need for effective leadership and good governance can ensure political stability in Rivers state to ensure an end to rural insecurity to guarantee the safety of life and properties of rural inhabitants.
- ii. There is a need for a well-equipped, funded and coordinated security that can protect lives and property through intelligence gathering mechanisms with the cooperation of the international community as this can enhance the increasing rate of breakdown of laws and order in the rural communities.
- iii. The government at all levels should create an enabling environment for job opportunities for the teeming unemployed youths. The engagement of the rural youths in employment can reduce the level of insecurity in the rural communities and reduce rural-urban migration.

### **REFERENCES**

- Baba, I. Y., Nasiru, M. I. & Kadafa, A.A. (2017). Land use conversion and its implication on the environment in Abuja, Nigeria. *The Geographical Journal, New Series*, 11(2), 90-100.
- Brueckner, J. K. (2000). Urban Sprawl: Diagnosis and Remedies. *International Regional Science Review*, 23(2), 160-171.
- Daramola, A., & Ibem, O. (2010). Urban Environmental Problems in Nigeria: Implication for Sustainable Development. *Journal of Sustainable Development in Africa*, 2(1), 124-145.
- Dutt, A., & Noble, A. (2003). Urban development of South Asia. In A. Dutt, Noble, A., Venugopal, G., & Subbiah, S. (Ed.), *Challenges to Asian Urbanisation in the 21<sup>st</sup> Century* (pp. 255-275).
- Enoguanbhor, E.C., Gollnow, F., Ostergaard Nielsen, J. O., Lakes, T. & Blake Byron Walker, B.B (2019). Land Cover Change in the Abuja City-Region, Nigeria: Integrating GIS and Remotely Sensed Data to Support Land Use Planning, *journal of sustainability*
- Gambo, B. (2014). Origin and growth of Urban Kano. In Tanko, A. I.; Momale, S.B. (eds) *Kano Environment, Society and Development*. Adonis and Abbey Publishers Ltd, Abuja.
- Ginkel, H. J. & Marcotullio, P. J. (2005). Asian urbanisation and local and global environmental challenges. In Kiener, M. Koll-Schretzenmayr & Schmid, W. (Eds.), *Managing Urban Futures: Sustainability and Urban Growth in Developing Countries*.

- Ibrahim Yusuf Baba, Nasiru M, Idris & Kadafa, A.A. (2017). Land use conversion and its implication on the environment in Abuja, Nigeria, *The Geographical Journal, New Series 11(2)*,290-316.
- Idowu, O. O. (2013). Challenges of urbanization and urban growth in Nigeria. *America journal of sustainable cities and society issue, 2(4)*, 67-87.
- Ikudayisi, A. E. and Adegbehingbe, V. O. (2017). Impact of quality and usage of outdoor spaces on sustainable campus environment in Akure, Nigeria. *American Journal of Environmental Protection, 6(11)*, 105-111.
- Jiboye, A. D. (2009). Evaluating tenants satisfaction with public housing in Lagos, Nigeria. *Town Planning and Architecture, 33(4)*, 239–247.
- Jiboye, D. A. (2011). Sustainable Urbanization: Issues and Challenges for effective urban governance in Nigeria. *Journal of sustainable Development, 4(6)*, .211-224.
- Maigari, A. I.(2014). Population growth in the Kano Region. In Tanko,A. I. and Momale, S. B.(Eds) Kano, Environment, Society and Development, London & Abuja, Adonis &Abbey publication.
- Maiwada, A. D. (2014). Urban planning in the context of rapid growth. In Tanko,A. I. and Momale, S. B.(eds) Kano, Environment, Society and Development, London & Abuja, Adonis &Abbey publication.
- Maiwada, A. D.(1995). Disappearing open spaes in kano metropolis. In Falola, J.A.,Ahmed,K., Liman, M.A and Maiwada, A.D. (Eds) Issues In Land Administration and Development in Northern Nigeria. Kano State Urban Development Board (1980) Metropolitan Kano 2000 Master Plan, Kano
- Maxwell DC, Armar-Klimesu LM, Ahiadeke C, Ruel M, Morris S. (1998). Urban livelihoods, food and nutrition security in greater Accra. Research Report. Washington, D.C., International Food Policy Research Institute. 1998.
- Morelli, J. (2011). Environmental Sustainability: A definition for environmental professionals. *J. Environ. Sustain.1*, 19–27.
- Mortimore, M. & Tiffen, M. (1995). Population & environment in time perception: The Machakes Story. In Tony Binns (Eds) *People and Environment in Africa*. John Wiley and Sons.
- Mortimore, M. (1993). The intensification of pre-urban agriculture: The Kano Close Settled Zone, 1964-1986”.In Turner II, B.L. Goran, H. and Robert, K. (Eds) *Population Growth Agricultural Change in Africa*. University Press Florida.

- Ogunsola, S. A. (2016). Social sustainability: Guidelines for Urban Development and Practice in Abuja City, Nigeria, thesis Nottingham Trent University.
- Okopi, U. M. (2021). Urbanization and sustainable growth of urban kano, nigeria. international conference on energy and sustainable environment IOP Conf. Series: Earth and Environmental Science 665 (2021) 012063
- Olofin , E. A., & Tanko, A.I. (2002). Laboratory of areal differentiation: metropolitan Kano in geographical perspectives. Department of Geography, Bayero University Kano.
- Oluwatayo, A. & Opoko, A. (2014). Trends in Urbanisation Implication for planning and low-income housing delivery Lagos, Nigeria. *Journal of Architecture Research*, 4 (1A): 15-26
- Ooi, G. L. (2005). Sustainability and Cities: Concept and Assessment. Singapore: Institute of Policy Studies. In Suharto, T., Yigitcanlar, T. and Mayere, S. (Eds.2009) Urban Growth Management for Sustainable Urbanization: Examples from Asia- Pacific City Regions. In: Proceedings of the International Postgraduate Conference, 5- 6 June 2009, Hong Kong Polytechnic University, Hong Kong.
- Sahn, D, & Alderman, H. (1997). The determinants of nutrition in Mozambique: The importance of age-specific effects. *World Development* 1997; 25 (4): 577-588.
- Unah M. O.(2020a). Evaluation of Infrastructure Development in Resettlement Schemes of the Federal Capital Territory, Abuja. Kaduna State University Environmental Science Journal (KESJ) 1(2), 347-389.
- Unah, M. O. (2020b) Assessment of Building Defects and Maintenance in a Transformed Public Housing: a case of Kabuga Housing Estate Kano, Nigeria. Proceeding of AARCHES Conference Ilorin 2020.
- Unah, M. O. (2020b). Evaluation of Students Perception of Outdoor Learning Space in Sustainable Academic Environment: A Study of Bayero University, Kano. African Journal of Earth and Environmental Sciences (AJEES), 2(1), 330-339
- Unah, M. O., & Abubakar-Kamar, A.T. (2020). Urban green spaces in Kano City: Challenges and Prospects. ARCHITECTURE Journal, University of Jos, Vol.xx, UN-Habitat. (2008) State of the World's Cities 2008/2009. London: United Nations Human Settlements Programme (UN-HABITAT).
- Unah, M. O., & Ibrahim, Y. B. (2019). Urbanization and development control management of sustainable growth in Nigeria. paper presented at the Environmental Management Association of Nigeria (EMAN), Book of Proceedings, 2019 Annual Conference, theme: Toward Sustainable Management of Nigeria's Urban Environment, at Grand Cubana Hotel, Abuja Nov.6th -8<sup>th</sup>

- Unah, M. O., & Muktar, M. (2020). Spontaneous settlements at the Peri-Urban Fringe: The Benefits of Adopting the Principles of Sustainability. LAUTECH Journal of Civil and Environmental Studies, Vol. X, Issue YY.
- Unah, M.O. (2019a). Residential housing redevelopment and its impact on Asokoro District f Abuja Nigeria, paper presented at the 1st International Conference on Sustainable Infrastructural Development (ICSID 2019) June 24th -28th, 2019. Covenant University Canaan Land, Ota Nigeria. Available online at: open access: IOP Conf. Series|: Materials Science and Engineering 640 (2019) 012011, Doi:10.1088/1757- 899X/640/1/012011.
- UNFPA (United Nations Population Fund). (2007). State of the World Population 2007: Unleashing the Potential for Urban Growth: UNPFA. Suharto, T., Yigitcanlar, T. and Mayere, S. (2009) Urban growth management for sustainable urbanization: examples from Asia-Pacific city regions. In: Proceedings of the International Postgraduate Conference, 5-6 June 2009, Hong Kong Polytechnic