

Rural Depopulation and its Planning Implications on the Development of Onitsha Urban Environment in Anambra State, Nigeria

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Abstract

This paper identifies urbanization problems in Onitsha in line with the drivers of rural outmigration into Onitsha as a prelude to understanding the major cause of the problems, and also to x-ray the rationale for rural out-migration in Anambra State. Data for this study were sourced from primary and secondary sources. One hundred and twenty copies out of one hundred and thirty questionnaires administered were retrieved and used for data analysis. To explain the implications of rural out-migration into Onitsha urban environment, the research adopts survey research method (use of questionnaire) and simple random sampling technique in choosing field respondents for data collection. Data analysis shows that the main driver of rural out-migration into Onitsha is rural poverty and unemployment. Analysis on its planning implications for Onitsha urban development revealed that the issue under reference has resulted to serious slum, pollution, transportation and housing problems. To determine how Rural Out-migration into Onitsha affects Onitsha Urban Environment, Simple Linear Regression Analysis was used and the test was statistically significant at 5% confidence level, indicating positive correlation between out-migration into Onitsha urban and Onitsha urban environmental problems. Statistical significance is represented by $F = 31.746$, $P = 0.00000007$, while the R^2 value demonstrates that 84% of environmental problems in urban Onitsha stem from population expansion resulting from rural out-migration. The research therefore suggests comprehensive understanding and evaluation of rural depopulation drivers as prerequisite for controlling urban migration patterns, along with deploying appropriate technological solutions and Geographic Information Systems for environmental monitoring and waste control in Onitsha.

Key Words: Urbanization, Depopulation, migration, rural poverty, unemployment.

Introduction

Globally, the nexus between migration and development has remained an issue of vigorous academic discourse (World Bank, 2007). Over the years, people have been moving in search for better life and in response to changes in their environment. For nomads and pastoralists, such movement is part of their livelihood (International Organization for Migration, 2009). This shows that the process of people migrating to other areas in search of livelihood is not novel. However, what has gained relevance in the academic discourse is the increasing voluntary movement in quest for 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. This is especially among the poor in the developing countries (Economic Commission for Africa, 2006). In this regard, rural-urban migration results from the search for perceived or real opportunities as a consequence of rural-urban inequality in wealth (Madu, 2006). According to research over the years, this developmental inequality and urban bias arise from the disproportionate concentration of wealth, assets, economic power, commercial activities, and diverse services in urban areas, coupled with ongoing rural environmental neglect and deterioration (Timalsina, 2007). This is not far from what is obtainable in Onitsha urban.

Spanning approximately 50 square kilometers, Onitsha serves as the entry point to eastern Nigeria and represents one of the country's key economic hubs. It is the major commercial hub in the eastern region with urbanization rate of 60% and daytime population of over 1.5 million, already conforming with the projection of 62% of rural Africa to live in cities of Africa by 2025 (Kante, 2004). Factors responsible for this growth are not far from locational attributes and concentration of economic activities which attract investors and encouraged migration into Onitsha. The convergence of these elements, especially access to road and water transportation routes, has positioned Onitsha among Nigeria's four primary zones for industrial and commercial development (UN-Habitat, 2009), as well as a focal point for jobs and capital investment. This confirms why progenitors of various migrating groups covet Onitsha as safe haven for resettlement, and why Onitsha is over populated till date.

Notwithstanding the foregoing prospects and opportunities, Onitsha is currently fraught with the problems of proliferation of slums and squatter settlements, transportation and traffic congestion, housing and infrastructure, pollution, climate change and urban heat island, crime,

poverty and unemployment, and increased urban stress and stroke extremes, which have made Onitsha uninhabitable for the residents. Furthermore, the population continues to grow, yet the state government has not implemented measures to manage this burgeoning population for over a decade. The government's most recent initiative was developing the Onitsha Structure Plan in 2009. Due to the failure to execute the Structure Plan's provisions, the state government abandoned the high-quality recommendations for decongesting Onitsha and instead adopted incremental and conventional approaches that failed to produce the anticipated significant positive outcomes. This paper aims to investigate the drivers of rural out-migration into Onitsha urban environment and its planning implications for Onitsha urban development. The specific objectives of this study include the review of literature on the meaning, causes and effects of rural depopulation; field survey and analysis on how rural out-migration into Onitsha determines Onitsha urban environmental problems; and the planning implications of rural outmigration into Onitsha.

Literature Review

Urbanization is the agglomeration of people in relatively large numbers at a particular spot on the earth's surface (Agbola, 2004). Urbanization in the developed countries plays a major role in infrastructure development, economic growth, improved welfare and social services. In the context of developing countries, urbanization is construed as a product of distorted policies that favor city growth, produces urban elites via excessive migration and creates army of unproductive and underemployed informal workers (Yunusa, 2011). Rapid urban growth is both a problem for cities and the rural areas it depopulates (Kante, 2004; Nanavati, 2004). Extraordinary population growth rates resulting from rural-urban migration and metropolitan expansion are contributing to unprecedented increases in individual urban populations. The rush to the cities, caused in part by the attraction of opportunities for wealth generation and economic development, has created the phenomenon of megacities that have a population of over 10 million with incredibly severe ecological and socio-economic problems which are difficult to manage in a sustainable way (Kelly, 2011). This is because over 70% of city growth currently happens outside of the formal planning process and 30% of urban populations in developing countries live in slums or informal settlements, where vacant state-owned or private land is occupied illegally and used for illegal slum housing (Kelly, 2011).

Research examining migration's effects on rural communities has been conducted worldwide, encompassing studies by Glytsos (2002) in Eastern Europe, Sibanda (2004) in South Africa, Azam and Gubert (2005) in Mali, Lucas (2005) in Albania and Morocco, Nwajiuba (2005) in Nigeria, Adams (2006) in Latin America, McKenzie (2006), Taylor and Mora (2006) in Mexico, Sorenson (2004) in Somali, and the World Bank (2007) across developing countries. These studies, however, emphasized migration patterns and remittance consequences, neglecting the implications of rural depopulation on urban expansion.

Rural depopulation describes persistent population decline that prevents regions from regaining previous population peaks (Johnson and Lichter, 2019). This concept implies the gradual deterioration of rural communities and the challenges in restoring their populations (Westhoek, van den Berg, de Hoop and van der Kamp, 2004). In China's context, rural depopulation involves younger generations relocating to cities while elderly populations remain (Li, 2015). Comprehending contemporary rural demographic patterns necessitates examining the interaction between migration flows and natural population change. These factors operate unevenly across regions, with numerous rural communities experiencing extraordinary demographic shifts, particularly as aging populations—depleted by decades of young adult out-migration—face natural population decline (Johnson and Lichter, 2016). Out-migration disproportionately affects young adults, resulting in aging communities increasingly unable to sustain reproduction (Johnson and Winkler, 2015). Decades of selective youth migration have eroded nonmetropolitan counties' demographic sustainability by depleting reproductive-age populations, diminishing prospects for demographic recovery. This pattern of elevated mortality and reduced fertility is now embedded in many declining rural areas' age structures. For instance, between 2010 and 2016, rural China experienced a net loss of 462,000 residents, with most non-metropolitan counties losing population (Cromartie, 2017). Additionally, immigration from Mexico and Latin America, along with Hispanic birth rates, declined substantially following the 2008–2009 recession, eliminating another historically important rural growth source (Lichter, 2012).

Within international scholarship, rural emigration factors are predominantly socioeconomic (Anderlik, 2004) and occasionally physio-cultural. Traditionally, rural emigration has been attributed to declining agricultural employment, insufficient non-agricultural job opportunities, and superior economic prospects in cities (Rao, 2007). This is commonly described as push-pull dynamics: push factors stemming from agricultural labor surplus, and pull factors arising from

urban employment appeal (World Bank, 2007). Some perspectives directly connect these elements, contending that urbanization extracts rural populations to levels that compromise social sustainability and trigger absolute population loss (Knight, 1994). Certain studies indicate that struggling agricultural economies, sectoral adjustments, structural transformations, collapse of traditional economic systems, or underinvestment in rural economies and services drive rural depopulation (Rao, 2007), including attractive urban wages that partially explain youth migration from rural to urban areas where economic activities cluster and incomes are higher (Imanishi, 2003). Additionally, de-agrarianization through rapid industrialization, inadequate rural infrastructure quality, relaxed farmland ownership regulations, and diminished on-farm employment due to land use changes contribute to rural depopulation and community dissolution (Dockstader, 2002). An often-overlooked dimension of rural depopulation is rural corruption, which constitutes a primary reason rural infrastructure remains underdeveloped in most developing nations (Imanishi, 2003).

Materials And Methods

Onitsha urban is situated in Nigeria's Anambra State, positioned at a significant east-west Niger River crossing point on the river's northern bank. The city is located between latitudes 6°07'N and 6°12'N and longitudes 6°45'E and 6°50'E, serving as a gateway connecting the contrasting regions east and west of the Niger (See Figures 1 and 2). The Niger River functions as a waterway linking the northern savanna zone with the southern forest and delta areas. These geographical advantages facilitated Onitsha urban's early emergence as a commercial hub (Okoye, 1996). As a prominent trading center and river port along the Niger River in southeastern Nigeria's Anambra State, it hosts West Africa's largest single open-air market and possibly Anambra State's most dynamic property market. Its initial growth stemmed from its favorable geographic location and positioning. The Onitsha urban environment, illustrated in Figure 2 below, comprises fifteen (15) layouts: GRA Layout, GRA Phases 1 and 2 Layout, Omagba Phases 1 and 2, Fegge, Enu-Onicha, Awada Layout, Okpoko Layout, Odoakpu, Obosi Layout, Iyiowa, Woliwo, Harbour Industrial Layout, and Owerri Road Layout (See Figure 2).

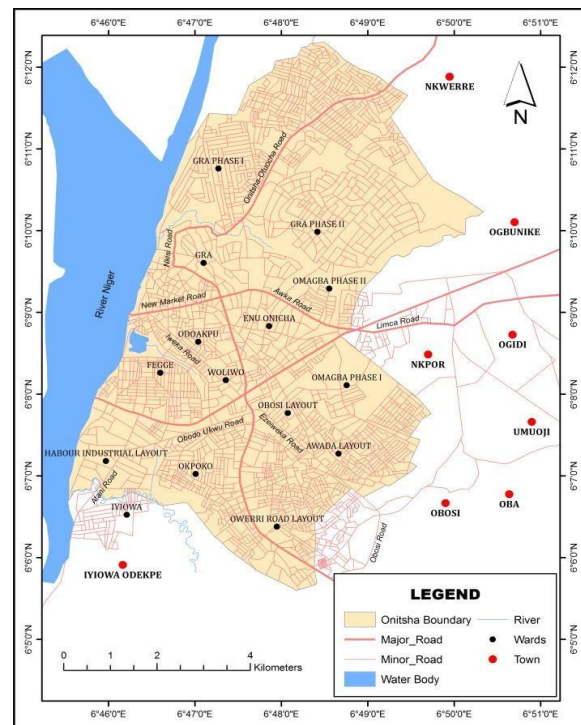
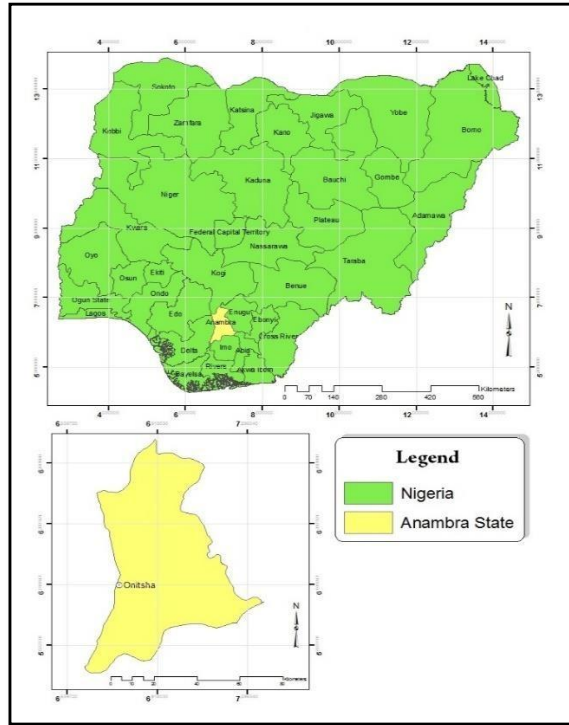


Figure 1: Anambra in the Nigerian Context *Figure 2: Map showing Onitsha Urban Area*

Source: Toyonscape Planning Consultants (2014). **Source:** Researchgate.net (2021).

This research employs a survey design focused on gathering and examining questionnaire responses from population samples to capture their perspectives, viewpoints, and feelings regarding the topic. The researcher utilized simple random sampling for selecting field participants due to difficulties in establishing the sampling frame from the total population across the fifteen wards comprising the study area. Ward population totals remain highly uncertain since published National Population Census Commission data excludes Onitsha's ward-level population figures.

Research data originated from both primary and secondary sources. Primary data collection involved questionnaire distribution, direct observation, and oral interviews. One hundred thirty questionnaires were randomly distributed, with one hundred twenty returned completed and valid, representing a 98% response rate. These returned questionnaires formed the basis for data analysis.

Secondary data were obtained from online scientific publications and related scholarly materials. These sources underwent thorough examination aligned with the research aims and objectives, with reviewed content carefully analyzed.

Data representation and explanation of associations and relationships within data groups employed descriptive statistics. Presented data underwent Simple Linear Regression Analysis to assess how population growth driven by rural migration influences urban environmental challenges in Onitsha.

Results And Discussion

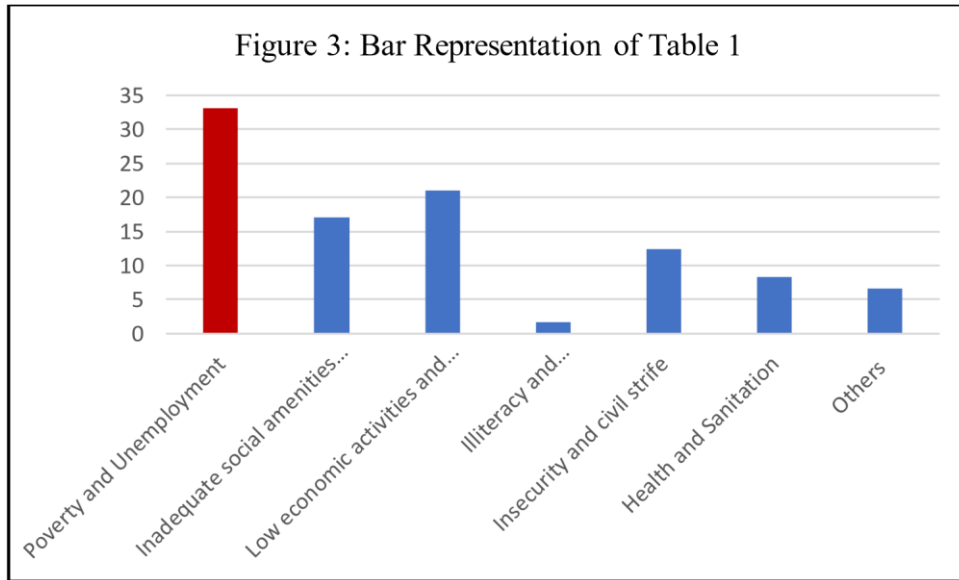
Economic theory tried to justify that the main cause of rural depopulation of villages is the hard work in agriculture with significantly lowers income when compared to non-agricultural activities. Modern economic theory points to two important factors; repulsion factor, which includes low incomes in agriculture together with poor working conditions, and other striking factors like better working conditions, safety in earnings etc., that attract farmers in non-agricultural activities (Pejanović, 2010). The creation of employment opportunities in the city (even poorly paid jobs) with better conditions for the education of children are main reasons for mass exodus from the village.

Nigerian urban centers or cities are springing up and people are migrating from the rural areas to urban areas, and they have different reasons for migrating from rural areas to urban centers. These reasons may include among others, lack of employment opportunities, lack of infrastructural facilities, educational institution etc. According to Afolayan (1995), rural areas can easily be identified by various criteria, apart from population. Such criteria include; the level of infrastructural development i.e. road networks, educational institutions, water supply, electricity, health facilities, communication, etc. Other criteria used include Occupation, Housing, Extent of community planning etc. The above overview should not be misconstrued for a checklist for comparing the findings of the field analysis with the literature, rather, it is mainly to provide the foreground to understanding the drivers of rural out-migration for the purpose of generalization. To facilitate data analysis, field data must first be displayed in tables and charts. The subsequent field analysis and its findings will provide the basis for drawing inferences and formulating generalizations.

Table 1: Drivers/Factors of Rural Out-migration into Onitsha

S/No	Factors	Frequency	Percentage (%)
1	Poverty and Unemployment	40	33
2	Inadequate social amenities and public infrastructure	20	17
3	Low economic activities and low wages	25	21
4	Illiteracy and communication problems	2	1.7
5	Insecurity and civil strife	15	12.4
6	Health and Sanitation	10	8.3
7	Others	8	6.6
	TOTAL	120	100

Source: *Field Survey, 2021.*

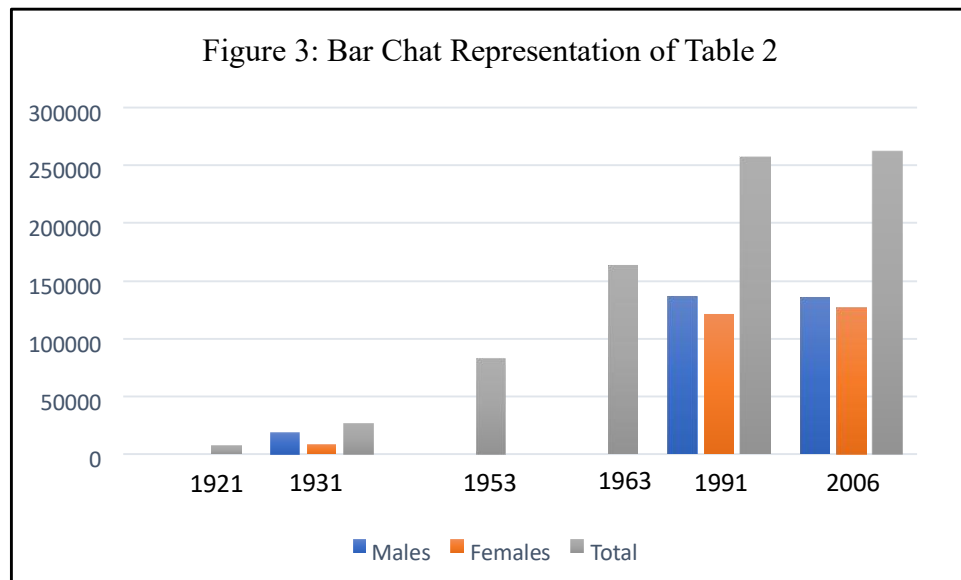


Source:*Excerpt from Table 1.*

Table 2: Population Distribution of Onitsha (1921 – 2006)

Year	Males	Females	Total	% Annual Growth Rate over the period
1921	N/A	N/A	8,084	-
1931	18,356	8,565	26,921	23.3
1953	N/A	N/A	82,745	9.42
1963	N/A	N/A	163,032	9.7
1991	136,230	120,711	256,941	2.06
2006	135,508	126,604	261,604	0.12

Source: 1991 and 2006 National Population Censuses.



Source: Excerpt from Table 2.

Table 3: Simple Linear Regression Analysis to determine how Rural Out-migration into Onitsha Urban Environment Determines Onitsha Urban Environmental Problems.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1586.273	1	1586.273	31.746	.000 ^b
	Residual	7994.869	160	49.968		
	Total	9581.142	161			
a. Dependent Variable: Urban Environmental Problem						
b. Predictors: (Constant), Rural Out-migration into Onitsha Urban Environment						

Source: *Field Survey and Analysis, 2021.*

Drivers of Rural Out-migration into Onitsha

Table 1 presents respondents' perspectives on factors driving their migration to Onitsha. The data reveals that the largest proportion of participants (33%) identified rural poverty and unemployment as the primary motivation for relocating to Onitsha, followed by insufficient social amenities and public infrastructure (17%), limited economic activities and low wages (21%), insecurity and civil conflict (12.4%), among others. This finding partially aligns with Pejanović's (2010) analysis of rural depopulation causes. Consequently, Onitsha's urban population will likely continue increasing unless effective rural and urban development initiatives are implemented to curtail rural out-migration to Onitsha and manage the city's urban environment.

Population Distribution of Onitsha (1921 – 2006)

Table 2 demonstrates that Onitsha's initial census in 1921 recorded a population of 8,084. By 1931, this figure had more than tripled to 26,921, comprising 18,356 males and 8,565 females. This expansion resulted from the influx of male traders, government employees, and educated job seekers. The population grew from 52,745 in 1953 to more than triple that amount by 1963. The 1991 census documented 256,941 residents, with 136,230 males and 120,711 females.

The 2006 census produced figures comparable to 1991, though the enumeration process in Onitsha was inadequately executed. Movement for the Actualization of the Sovereign State of

Biafra members disrupted the census in Onitsha and elsewhere in Anambra State, asserting those territories constituted "Biafra land." Applying the National Population Commission's 2.83 percent growth rate, Onitsha's 2006 population projected from the 1991 count of 256,941 should have reached 390,509. This estimate represents nighttime residential population; daytime population potentially approaches 1.5 million due to commuting employees and visitors. Onitsha's accelerated population growth carries significant implications for the city's physical planning and development (UN-Habitat, 2009), which are examined thoroughly in the following section.

The Planning Implications

Rural depopulation produces both positive and negative effects for both origin and destination communities. The most commonly observed impacts on rural areas include migrants alleviating poverty through financial remittances and mutual aid, while simultaneously leaving their home communities relatively fragmented and underdeveloped. The most frequently observed impacts on urban destinations include newcomers meeting labor demands during urbanization processes, while also creating competition with existing urban residents for housing, jobs, transportation, and social services, thereby generating additional social challenges.

Water And Sanitation

Field observations indicate that 95 percent of households in urban Onitsha lack adequate water supply and sanitation access. This situation has deteriorated over time, as the percentage of residents with safe drinking water access decreased from 49.9 percent to 49 percent between 1999 and 2003. Likewise, the share of the population with hygienic excreta disposal facilities dropped from 85.5 percent in 1999 to 49 percent in 2003, before rising to 55 percent in 2021.

Slums

The principal slum areas identified in Onitsha include Otu, Mammy Market, and Okpoko. Otu and Mammy Market represent inner-city slums featuring deteriorating structures numbering at least 400 buildings. Okpoko constitutes the largest slum settlement in urban Onitsha, spanning 292 hectares with a rapidly expanding population that grew from 31,000 in 1978 to 128,417 in 1998. By 1998, it had become one of Nigeria's most densely populated slums, accommodating approximately 44,000 people per hectare. Using graphical projection at comparable growth rates, the population likely reached 140,000 by 2008. The area exhibits high-density development with

630 persons per hectare. With average room occupancy of 4 persons, one-room dwellings comprise 56.13% of total housing stock, while single-room units represent 87.4% of all houses. The area averages 6.54 households per dwelling, 7.1 persons per household, and 45.6 persons per dwelling (Onweluzo, 2017).

Transportation

Population growth in Onitsha's urban environment has significant implications for transportation. Field observations revealed that private cars account for 40% of total daily vehicular traffic in Onitsha, while minibuses comprise 36%. Tricycles represent approximately 20%, with the remaining 4% consisting of other transport modes. This has led to escalating traffic congestion in Onitsha. The chaotic conditions have raised serious concerns and become so prevalent that traffic delays are now widely accepted as legitimate excuses for tardiness at work and both formal and informal gatherings.

Diseases

Regarding common diseases linked to improper waste disposal in Onitsha's urban environment, reliable health or medical records could not be secured from Onitsha general hospitals. Field-sourced data indicated that malaria represented the most widespread illness and was frequently accompanied by typhoid fever (60%). Additional ailments included hypertension (20%), diabetes (8%), kidney disease (4%), and other conditions (6%). This suggests that Onitsha residents experience malaria and typhoid more frequently than other health conditions.

Pollution

Field observations also reveal that urban Onitsha faces severe pollution problems, particularly involving noise, air, and water contamination. Visits to the Harbour Industrial Layout, Onitsha Main Market, and Ose Okwodu Market confirmed significant microclimate alterations. The excessive noise from markets and the release of toxic commercial and industrial effluents into the Niger River pose health hazards to aquatic life and will negatively impact both groundwater and surface water quality.

Other Implications

Additional implications of rural depopulation for Onitsha's urban environmental development identified through this research include, but are not limited to: informal settlements

(encompassing land tenure issues, development approval processes, and building regulation), natural disasters (flooding and fires), uncoordinated urban planning, population growth management challenges, food, water and energy insecurity, elevated urban densities, insufficient green spaces, loss of buildings with local cultural heritage or historic and architectural significance, increased crime rates, growing inequalities, climate change impacts, informal development patterns, tenure insecurity, unregulated real estate markets, unauthorized construction within the city and peripheral areas, and deteriorating city centers. These findings partially align with Gbadegesin and Aluko's (2010) observations from comparable research in Lagos Megacity, which identified implications including urban decay, slum formation, overcrowding, lawlessness, and encroachment on peri-urban areas resulting in land and natural resource depletion.

Table 3 demonstrates that the test achieves statistical significance at the 0.05 confidence level, as the P-value falls below the alpha threshold. Statistical results show $F = 31.746$ and $P = 0.00000007$. The coefficient of determination (R^2) indicates that population growth driven by rural-to-urban migration accounts for 84% of Onitsha's urban environmental challenges, with the remaining 16% attributable to other factors.

Conclusion And Recommendations

Unfortunately, numerous urban planners remain influenced by rationalism, logical positivism, and other modernist concepts while neglecting the core issue of rural depopulation and its planning implications for urban development. To provide context for this background, the paper extensively discussed the planning consequences of rural depopulation in Onitsha's urban environment. The analysis provides baseline information on factors driving rural out-migration in Anambra State and the challenges this poses for Onitsha's urban environment. In light of these findings, the researcher recommends the following measures for sustainable urban growth and development in Onitsha:

- i. To discourage migration to Onitsha, understanding the drivers of rural out-migration and depopulation is essential. This will establish the foundation for formulating effective rural development policies and programs focused on developing credit and capital access, appropriate technology deployment, encouraging community and local government participation, and implementing suitable educational policies.

- ii. Implementation and monitoring of rural capacity-building initiatives, agricultural development, employment creation, wealth generation, and other rural development programs should target the landless, women, youth, and unskilled workers to integrate them into rural employment structures and promote increased wages for both skilled and unskilled labor.
- iii. All government levels, including non-governmental organizations, should prioritize providing safe drinking water and sanitation facilities in Onitsha. Achieving this requires public participation, awareness campaigns, and town hall meetings to educate residents about sanitation benefits and the importance of maintaining cleanliness in Onitsha.
- iv. Preparation and implementation of comprehensive urban development plans, master plans, structure plans, and action area plans for slum upgrading are necessary, along with strengthening existing planning legislation to address regulatory gaps. This ensures sound frameworks guide urban growth and development in Onitsha. These efforts should be complemented by utilizing Geographic Information Systems (GIS), Land Information Systems, and similar technologies to monitor Onitsha's environment.
- v. Government should collaborate with the private sector to ensure financial and property markets possess adequate capacity to meet current and future demands for employment, housing, transportation, utilities, and infrastructure in Onitsha.
- vi. Adopting global waste management standards such as the Pay-As-You-Throw (PAYT) system is recommended, where residents pay for each waste container generated. Additionally, efforts must restrict the discharge of untreated sewage and solid waste into the Niger River. A standardized Air Quality Program should be implemented to reduce air pollution emissions by requiring manufacturing firms to develop pollution prevention plans and goals, and report on their pollution reduction efforts.

References

Adams, R. H. (2006). Remittances, poverty, and investment in Guatemala, in Brain Drain, C. O. and M. Schiff (eds.) International Migration, Remittances. Washington, DC, USA: The World Bank and Palgrave Macmillan. Pp.53–80.

- Agbola, T. (2004). *Readings in Urban and Regional Planning*. Ibadan, Nigeria: Macmillan Press. Pp. 179.
- Azam, J.P. and Gubert, F. (2005). Migrant remittances and economic development in Africa: A review of evidence in, *Proceedings of the AERC Plenary Session, Nairobi, Kenya*.
- Cromartie, J. (2017). Recent Population Change. Available at <https://www.ers.usda.gov/topics/rural-economy-population/population-migration/recentpopulation-change/> (Accessed on April 25th, 2021).
- Dockstader, C. (2002). Saskatchewan's Farm Ownership Legislation. *Saskatchewan Standing Committee on Agriculture*, May 22nd.
- Gbadegesin, J. T. and Aluko, B.T. (2010). The Programme of Urban Renewal for sustainable Development in Nigeria; Issues and Challenges. *Pakistan Journal of Social Sciences* 7, (3): 244-253.
- Glytsos, N. P. (2002). "The role of migrant remittances in development: evidence from Mediterranean countries. *International Migration*, 40 (1):5–26.
- International Organization for Migration. (2009). *Migration, Environment and Climate Change: Assessing the Evidence*. Geneva: International Organization for Migration.
- Imanishi, Y. (2003). *Transport and Social Exclusion: An Overview of the Japanese Position*. Experts' Seminar, University of Westminster, London, 4th April.
- Johnson, K.M. and Richelle, W. (2015). Migration Signatures across the Decades: Net Migration by Age in U.S. Counties, 1950–2010. *Demographic Research*, 22(38):1065–80.
- Johnson, K.M. and Daniel, T.L. (2016). Diverging Demography: Hispanic and Non-Hispanic Contributions to US Population Redistribution and Diversity. *Population Research and Policy Review*, 35(5):705–25.
- Johnson, M.K., and Lichter, D.T. (2019). Rural Depopulation: Growth and Decline Processes over the Past Century. *Rural Sociology*, 0(0):1-25. DOI: 10.1111/ruso.12266.
- Kante, B. (2004). Local Capacity for Global Agenda: Impact of Cities on Global Environment. Second World Urban Forum, Dialogue on Urban Sustainability. United Nations Environmental Programme (UNEP). Barcelona, Spain: World Urban Forum.

- Kelly, P. (2011). Managing Megacities: A Spatial Solution in Megacities: *Trends in Spatial Information Management*. Copenhagen, Denmark: FIG Publication.
- Knight, J. (1994). Town-making in Rural Japan: An Example from Wakayama. *Journal of Rural Studies*, 10(3):249-261. doi:10.1016/0743-0167(94)90052-3.
- Li, X. (2015). Rural Depopulation in China: A Comparative Perspective. *International and Multidisciplinary Journal of Social Sciences*, 4(2):149-174. doi:10.17583/rimcis.2015.1503.
- Lichter, D.T. (2012). Immigration and the New Racial Diversity in Rural America. *Rural Sociology*, 77(1):3–35.
- Lucas, R. E. B. (2005). Migration and economic development in Africa: A review of evidence, in Proceedings of the African Economic Research Consortium Biannual Research Workshop, Nairobi, Kenya.
- Madu, I. A. (2006). Spatial inequality in Nigeria: the imperative of geographic perspectives in the development process. *Journal of Social and Economic Development*, 8(2):105–120.
- Mckenzie, D. J. (2006). Beyond remittances: the effects of migration on Mexican households, in Brain Drain, C. O. and M. Schiff (eds.) *International Migration, Remittances*. Washington, DC, USA: The World Bank and Palgrave Macmillan. Pp.123–147.
- Nanavati, S. S. (2004). Impact of Rural -Urban Migration on the Sustainability of Cities. World Student Community for Sustainable Community Development.
- Nwajiuba, C. (2005). *International Migration and Livelihoods in Southeastern Nigeria*. Geneva, Switzerland: Global Migration Perspectives.
- Onweluzo, F.A. (2017). Enhancing the Liveability of Informal Settlements: The Case of Okpoko in Ogbaru Local Government, Anambra State. Site Trainers Notes on Okpoko Informal Settlement for MCPDP Held at Awka, Anambra State. 26th-27th April.
- Pejanović, R. (2010). Demographic Problems as limiting factors for rural development of Vojvodina. *Gazette of the Anthropological Society of Serbia*, 45:65-75.
- Rao, C. (2007). Mechanism and Political Measures of Japanese Rural Depopulation and Its Reference to the Chinese Rural Construction. *Zhejiang University Journal of Humanities and Social Sciences*, 37(6):147-156.
- Sibanda, A. (2004). Who gets to drop out of school in South Africa? The role of individual and household attributes. *African Population Studies*, 19(1):99–117.

- Sorenson, N.N. (2004). The development dimension of migrant remittances: toward a gendered typology, in Proceedings of the International Forum on Remittances. Washington, DC, USA: The World Bank and Palgrave Macmillan.
- Taylor, J. E. and Mora J. (2006). Does migration reshape expenditures in Rural households? Evidence from Mexico. World Bank Policy Research Working Paper 3842.
- Timalsina, K. P. (2007). Rural Urban migration and livelihood in the informal sector: a study of street vendors of Kathmandu Metropolitan City, Nepal. Published Thesis in Development Studies, Department of Geography, Norwegian University of Science and Technology.
- UN-Habitat. (2009). Nigeria: Onitsha Urban Profile. Nairobi, Kenya: UN-Habitat.
- Westhoek, H., van den Berg, R., de Hoop, W. and van der Kamp, A. (2004). Economic and environmental effects of the manure policy in The Netherlands: Synthesis of integrated ex-post and ex-ante evaluation. *Water Science & Technology*, 49(3):190-116.
- World Bank. (2007). World Bank Indicators Online. Washington, DC: World Bank.
- Yunusa, M. L. (2011). Planning Cities for Wealth Creation. 1st Urban Dialogue. Akoka, Lagos: University of Lagos.