

Review Article

Urbanization and Its Environmental Consequences in Nigeria

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Abstract: This scholarly paper investigates urbanization and its environmental consequences in Nigeria. Urbanization deals with the mass movement of people especially potential jobs candidates from countryside to urban area due to high demand of labour at the place of destination. It is also population shift from rural area to urban area. This kind of movement often results to food insecurity from both the place of origin and the place of destination. Population growth is one of the impetuses of environmental deterioration due to the high influx of people to the urban areas from the rural areas as a result of higher employment opportunities in the urban areas, quality education, and advanced technology for communication and transportation systems, medical facilities among others. Urbanization leads to rapid sprawl, pollution, and environmental degradation. Data of the study were generated through content analysis from the findings of the previous works of other reputable scholars on the impacts of urbanization. Amongst other recommendations, the study recommends that government should accord serious attention on the agricultural sector in the rural areas so that it can serve as source of employment opportunities to the rural dwellers, entrepreneurship centres should also be built in the rural areas in order to absorb the available unemployed youths in the rural areas, there should also be planned and well managed urban expansion blueprints in order to curb environmental problems that spurred by urbanization.

Keywords: Urbanization, suburbanization, urban areas, rural areas, environment.

INTRODUCTION

In Nigeria there is often mass movement of young people especially unemployed youths from rural areas to urban areas in search of jobs in both governmental and private sectors in order to change to change their social status. Urban areas migration constitutes to the increase of urban population and thereby, resulting to more pressure on urban environment. With the urban areas, demand of land for housing, agriculture and urban infrastructure increases leading to increased pressure on farmlands, forests and water resources. Urbanization instigates desertification and environmental change, leading to water scarcity, soil erosion, and climate change. Environmental conditions in cities have gradually deteriorated due to the rapid growth of the cities and the attendance inability of social services and infrastructures to keep pace with the rate of growth. Population growth is considered as one of the major causes of environmental deterioration or degradation due to the high influx of people to the urban areas from the countryside which could also be termed as urbanization. Peters [1] asserted that the ecological and sociological “footprint” of cities has spread over ever-wider area and that only fewer places on the planet earth are unaffected by this phenomenon. These ecological and sociological footprints are instigated by exponential population growth in the urban areas. Hales [2] corroborated that the pace and scale of growth have outstripped the capacity to maintain acceptable standards of public health, environmental safety and sustainable economic growth in urban areas in less developed nations in Africa, Asia and Latin America. Urbanization process has been associated with other important aspects such as economic, social, and environment.

United Nations [3] revealed that urban living is often associated with higher levels of literacy and education, better health condition, greater access to social and economic services, and enhanced opportunities for cultural and political participation. Nevertheless, rapid and unplanned urban growth as well as urban expansion threatens sustainable development when the necessary infrastructure is not developed or when policies are not well-implemented. Unplanned or inadequately managed urban expansion leads to rapid sprawl, pollution, and environmental degradation, together with unsustainable production and consumption patterns.

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Continuing urbanization or migration from rural to urban areas will expand the number of megacities, and it concedes that megacities are often plagued by environmental deterioration, inadequate housing, traffic congestion, slums, crime, and homelessness and so forth. Brian [4] proposed urbanization issues such as: urban poverty, the rising crime rate, solid waste disposal, housing for the poor, environmental protection, pollution, and so on. Jusoh and Rashid [5], argued that those issues need to be tackled holistically to ensure the role of urban centre as the engine of economic growth that will be continuously maintained and enhanced. It is as the result of the aforementioned issues of urbanization that this scholarly paper is aimed to investigate urbanization and its environmental consequences in Nigeria.

CONCEPTUAL CLARIFICATION

Urbanization

Urbanization refers to a growth in the proportion of a country's population living in urban centres of a particular size [6]. From a demographic point of view, the level of urbanization is measured by the percentage of the population living in urban areas [7]. Urbanization is crucially linked to migration. In other words, urbanization deals with the continuous increase of population in cities or towns through migration from rural areas because of social and economic changes. It is also the transformation from a rural to urban-based societies. Urbanization as a world-wide phenomenon is a process of relative growth in a country's urban population accompanied by an even faster increase in the economic, political, and cultural importance of cities relative to rural areas. The term "urbanization" describes an increase in human habitation linked with increased per capita energy and resource consumption, and extensive landscape modification [8]. Since the population becomes more prosperous, demand for goods and services is often driven by more than just pure population growth. Above all, in most countries of the world, urbanization is a natural consequence and stimulus of economic development based on industrialization and post industrialization.

Suburbanization

Suburbanization refers to the spreading of urban population and employment from the central cities to satellite communities called suburbs. This movement results in an increased dispersion of urban population and employment over a land area [9]. Suburbanization is defined by Jackson [10] as the creation of residential areas, and to some extent industrial area, at the edge of the city. It occurs as a result of the urbanization of the city centre creating a need for larger areas of land and a better environment for housing. Based on the view of Jackson [10] suburb as a residential place, as well as a site of scattered dwellings and businesses outside a city, is as old as civilization and an important part of an ancient, medieval, and early modern urban traditions. In other word, Suburbs are socially and economically inferior to cities. The developments of suburb areas significantly depend on the development of the city. Suburbs refer to residential clusters on the periphery of a city or town.

Environment

In the views of Bayode, Emmanuel and Sogbon [11] environment is made up of biophysical components and processes of natural environment of land, water and air. By the above articulated concept environment also include all layers in the atmosphere, inorganic and organic matters, socio-economic components and processes of human endeavours. The elements mentioned here have a symbiotic relationship and any distortion of their natural state could affect economic activities. Environment can be viewed as all physical, non-physical, external, living and non-living situations surrounding an organism or groups of organisms that determine the existence, development and survival of organism(s) at a particular time. It can also be emphatically seen as the natural habitat of man with several components within which various kinds of activities and processes take place. Urbanization, overpopulation, ignorance and poverty amongst others are said to cause environmental deterioration. Environment encompasses constantly interacting sets of physical (natural and man-made) elements and non-physical, living and non-living (e.g. social, cultural, religious, political, economic) systems which determine the characteristic features, growth and sustainability of both the component elements of the environment and the environment itself [12, 13].

Theoretical underpinning

The study adopted Urban Bias Theory for the justification of this scholarly work.

Urban Bias Theory

This theory was propounded by Michael Lipton [14]. Lipton opined that resource allocation between towns and rural areas shows urban priorities and is therefore not based on equity and efficiency. On the issue of efficiency, Lipton reveals that excessive allocation of resources to the urban sector does not lead to high output as could be expected in a given time period [15]. Lipton sees the rural sector as having the potential for more growth, and that investment in such will be an overriding factor. On the question of equity he unveiled that a higher proportion of income is distributed to the urban sector than consistent with the maximisation of welfare [15]. The concentration of resources in the urban areas helps to improve growth there and produces less growth in the rural economy and at the expense of the rural poor.

Chambers [16] elucidates about the persistence of poverty in developing countries and particularly in rural areas. He views poverty in the same way as Lipton, as extreme in the rural areas, and therefore calling for more emphasis on rural development. He affirms that urban areas get a larger share of human and financial resources than rural areas. In addition to the above, Chambers [16] identifies urban bias in policy formulation, where most of the people who propose solutions to rural poverty are resident in urban areas. On the basis of this it is very unlikely that they have a full understanding of the rural environment and associated problems. Bezemer and Heady [17] established that urban bias continued to persist. This takes the form of less allocation of resources to the rural economy and small holder agriculture in favour of non-farm activities and industrial development in the urban areas. Urban bias is conceived as a great obstacle to growth and poverty reduction in less developed countries.

This theory further argues that government policies favour the urban regions than the rural areas, social amenities are provided on a larger scale in urban areas to the detriment of the rural areas even though the larger proportion of the population in Nigeria is found in the rural areas. The aforementioned bias factors necessitated the mass exodus of rural dwellers to urban areas due to better employment opportunities, quality education, social amenities, better communication and transportation system among etc. The migration from rural to urban areas leads to higher population growth and more pressure on the urban environment which constitute environmental deterioration because of more demand for land for housing, agriculture, urban infrastructures among others.

Critique of Urban Bias Theory

Urban Bias Theory has been subjected to considerable criticism by different scholars as stated below:

Gugler and Gilbert [18] unveils that the urban / rural explanation of classes is quite simplistic. Lipton articulates that rural underdevelopment and poverty is a result of excessive allocation of resources to urban development, which is characteristic of all less developed counties. This argument does not get support in situation where allocation of resources has been biased towards rural areas. Byres [19] asserted that urban bias theory is narrowly focused since it draws evidence from few Asian countries and poorly represents Africa, Latin America and the Middle East. Furthermore, Lipton fails to examine structural conditions, such as ideological orientation, that result in low urban bias in some countries while in others it is very high. Corbridge [20] reveals that urban bias theory has a dilemma in that it assumes only two class, being the rural class and urban class, and yet there are differential classes within the rural areas too. Griffin [21] sources than the poor, which the theory does not account for.

Environmental consequences of urbanization in nigeria

In Nigeria, Mba et al., [22] identified several types of environmental problems classified as ecological, poaching and habitat loss, increasing desertification and soil erosion. These are further subdivided into pollution which includes air, water and land pollution; deforestation, erosion and flooding; global warming and slums development. The environmental problems are identified and articulated below:

Water Pollution

Nigeria's coastal regions are seriously experiencing widespread contamination from petroleum exploration (gas flaring, oil spillage) while the general poor living conditions in urban areas in the country constitutes an affront to human dignity [23]. Mba et al. [24] were of the opinion that pollution from oil activities should probably be given only a moderate priority in the light of Nigeria's other severe environmental problems. Water pollution generally poses health risks to humans, terrestrial and aquatic lives. Environmental problems are associated with the increasing growth of urban slums including overcrowding in squalid housing conditions, poor quality or unavailability of basic infrastructures and social services, such as water and sewage facilities and even lack of access routes [25].

Air Pollution

Most air pollutions are produced in urban areas due to the present of higher numbers of industries, factories, motor vehicles and other household gadgets that generate gas. Air pollution contributes to global warming by depleting the ozone layer. In Nigeria as a nation state, air pollution emanates from three major sources such as energy generation, industry and transportation. Rapid urbanization is a major contributing factor to all the aforementioned major sources of air pollution. Degraded air quality in key urban centres, such as Lagos, Port Harcourt, Kano amongst others, is as a result of the heavy dependence on oil-dominated transportation. Motor vehicles produce more air pollution than any other single human activity [26]. Transportation requires huge amounts of energy. Globally, 20% of all energy produced is used for transportation. In this regard, between 60 and 70% goes toward transporting people, and the rest toward moving freight [27]. In addition, power plants, factories, and other stationary sources including the thousands of privately owned petrol and diesel generators used as power failure backups degrade the air quality of major urban centres in Nigeria. Traffic congestion which increases the generation of the cars' exhaust as a result of traffic delay is another major environmental problem in Nigerian as a nation state, particularly in its urban centres.

Land Pollution

Indiscriminate disposal of solid wastes provides breeding grounds for infectious disease vectors. Several studies have identified industrial and agricultural activities, indiscriminate waste disposal and oil spills as major causes of land pollution in Nigeria [28, 23]. In Nigeria urban areas, there are more concentrations of industrial activities and high level of waste generation coupled with poor disposal and management, which increases the probability of land pollution. For instance, the World Health Organization (WHO) [20] observed that almost all industrial activities cause some pollution and produce waste. However, relatively few industries (without pollution control and waste treatment facilities) are responsible for the bulk of the pollution both on land, air and water.

Urban Sprawl and Slum

The development of slums in urban areas and centres also deplete the physical environment, increases crimes and violence. Slums boost rapid deterioration of the physical environment and provide a breeding ground for prostitutes, criminals and social miscreants. Depletion of vegetation areas and open spaces resulting in the loss of biodiversity, air pollution and traffic congestion due to increasing use of private automobiles. Increasing urban population necessitates the provision of more roads to accommodate an ever growing number of vehicles, thereby creating sprawling metropolises. This situation is very common in Nigerian urban centres, due to lack of effective planning [29]. The result is noticeable in growing overcrowding in homes and increasing pressure on infrastructural facilities and increase deteriorating environment. Sprawl has directly contributed to the degradation and decline of natural habitats such as wetlands, woodlands and associated wildlife. It also reduces farmland and open spaces. In essence sprawl is widely known as ugly development with tendency to discontinuity and haphazard layout [30]. Urbanization in Nigeria is characterized by city slums with serious environmental and social consequences [31] corroborates that millions of Nigerians live in sub-standard and sub-human environment, plagued by slum, squalor and grossly inadequate social amenities.

Deforestation, Erosion and Flooding

The uncontrolled logging of trees for agricultural, infrastructural and timber purposes have greatly contributed to environmental degradation in Nigeria which is as a result of the population shift from rural areas to urban areas. Urban areas are congested and growing, without adequate environmental safeguards [32]. The major feature of Nigeria's ecology is its large and burgeoning human population and the increasing pressure; this population growth is mounting pressure upon the natural environment. Omofonmwan, S. I and Osa-Edoh, G. I, [33] asserted that agricultural development, urban growth, industrial expansion and pressure from an increasing population have curtailed the extent, diversity and stability of the Nigerian forest. The threats to biodiversity, tropical forests and the rest of the many ecosystems and natural habitats are overwhelming and escalating due to population growth in Nigeria urban areas.

Erosion constitutes threat to humans lives, means of livelihood, infrastructure, loss or shortage of land if not properly handled and managed, it also leads to the reduction of biodiversity; while flood causes the destruction of lives and properties, infrastructure and means of livelihood as well leading to economic losses. Flooding and erosion are common environmental problems in Nigeria associated to urbanization. Flooding had forced millions of people to leave their homes, destroying lives and properties, polluting water resources and increasing disease outbreaks. These environmental problems are attributable to urbanization process. Environmental conditions in cities have gradually deteriorated due to exponential growth of the cities and the attendance inability of social services and infrastructures to keep pace with the rate of growth. Inadequate storm drains, dumping of refuse in drainage lines and construction of houses close to and even on the natural water channels have been shown to be responsible in that order for the increasing cases of flood in the urban centres [31].

CONCLUSION

Urbanization which has to do with the mass movement of people especially potential jobs candidates from countryside to urban areas due to high demand of labour at the place of destination leads to pollution, environmental degradation in tandem with urban sprawl and slums. Urbanization also results to food insecurity from both the place of origin and the place of destination. Nigerian cities are witnessing high rate of environmental deterioration due to population growth in urban areas. Environmental conditions in cities have been gradually deteriorating due to exponential growth of urban areas. With the growth of the urban areas, high demand of land for housing, agriculture and urban infrastructure increases leading to increased pressure on the environment. Urbanization stimulates desertification and environmental change, leading to water scarcity and pollution, air pollution, land pollution, soil erosion and flooding including climate change. Indiscriminate dumping of refuse in drainages and construction of houses close to water channels have also been shown to be responsible for the increasing cases of flood in urban areas. Rapid growth of urban areas in Nigeria result to the creation of slums for the lower class due to overcrowding. Residents of urban slums are known to show deviance attitudes, apathy to government programmes and anti-social values like, prostitution, crimes, and juvenile delinquency [34].

RECOMMENDATIONS

The study recommends that:

- Government should accord serious attention on agricultural sector in the rural areas so that it can serve as major source of employment opportunities to the rural dwellers. Government should also establish industries and factories in the rural areas that will aid in absorbing jobless rural dwellers too.
- Entrepreneurship/skills development centres should be built in the rural areas in order to absorb the unemployed youths available in the rural areas for training that can enable them to be self-reliant and more skilful in other areas in order to curtail their rate of migration to urban areas.
- Policy making in respect to rural development should include some proportion of youths, women and community heads from the rural areas for effective outcomes.
- There should be planned and well managed urban expansion blueprints. And Environmental offenders should be fined in order to curtail the high level of environmental abuse(s) in urban areas.
- Poverty alleviation programme should be extended mostly to the rural dwellers so as to curtail the rate of poverty in the rural areas. And the programme should be handled by people with proven integrity.

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