UPSHOT OF URBAN SPRAWL ON CHANGING LAND USE AND BUILDING PATTERNS IN AKURE REGION, NIGERIA

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Abstract

This study investigates the consequence of urban sprawl on changing land use and building patterns in Akure and its adjoining communities. The study adopts Survey Research Design to investigate the upshot via structured questionnaire on sampled households in Akure region, which involved Akure municipal and eight adjoining settlements. The study also made use of interview, personal observation and photo-snaps to elucidate existing situation in the region. The average households in Akure were estimated at 95,232 and 14,794 in the eight adjoining communities. From this, a sample size of 1% was systematically selected; 952 in Akure municipal and 147 in the adjoining settlements. Findings show a regular massive flow of influx into the city due to unguided expansion which have serious sway in the determination of land use pattern in the city and its contiguous communities. This, in turn, has significant influence on variation in building patterns across the region. To mitigate this, the study advocates that concerned ministries should employ resourceful control measures over private and public land uses through effective zoning strategy. It also suggests the introduction of regional development programs in checking the rate of influx into Akure, being the state capital. Local government headquarters and other major towns in the region should be reinforced with functional basic facilities to curtail the excessive inflow of people to the state capital.

Keywords: Upshot, urban sprawl, land use change, building pattern, unguided expansion.

1.0 Introduction

Sprawl means different things to different people. Thus, there is ambiguity in defining exactly what it is and how it should be measured (Schneider and Woodcock, 2008; Banai *et al*, 2014). While some observed sprawl as unintended consequence of lifestyle in suburban houses and auto-commute to work, other people considered it a waste of resources; especially, in matter

relating to land, water, air, and energy. This is simply because of its unguided expansion which is inimical to civic life, economy and society (Hasse, 2004; Banai *et al*, 2014). To oust this ambiguity in the definition of sprawl, different professionals and experts from different fields express their view on what sprawl is. For example, Hayden (2004) defines sprawl as a process of large-scale real estate development resulting in low-density, scattered, discontinuous construction, usually on the periphery of declining older suburbs and shrinking city centres. Bourne (2001), cited in Owoeye (2016), relates his observation on sprawl to be an extension of the suburban margin; the spread of development into sensitive Greenfield and agricultural soils, increase in highway congestion, the proliferation of new subdivisions of homogeneous and low density, and single-family housing. It is a suburban development that is haphazard, disorganized, poorly serviced, and largely unplanned. According to Longman Dictionary (6th Edition, 2016), sprawl is defined as the spread of city buildings and houses into an area that used to be countryside, or the area in which this has happened. In other words, it is the spread of urban congestion, urban outlook, activities and influence into adjoining suburbs and rural hinterlands.

Land use change is a product of urbanization, which has been recognized as a global problem present in most countries of the world. According to Balogun *et al* (2011), urban populations in developing countries increase by 40% between 1900 and 1975. They assert that the trend will continue to add approximately 2 billion people to the urban population of the presently less-developed nations for the next 30 years. Arnfield (2003) argued that the world is becoming increasingly urbanized with 45% of the population already living in the urban areas as at the year 2000, with a projection that half of the world will live in urban areas by 2007. It was earlier estimated in 1999 by the United Nation Population Fund (UNPF,1999) that by the year 2025, 60% of the world's population will live in cities. Today, 55% of the world lives in cities with upward projection to 68% in 2050 (Akinbamijo, 2019). Sharing similar view, Oduwaye (2015)

anticipated 70% of world population living in urban areas by the year 2050 due to the advent of urban millennium. This trend shows the inevitability of cities sprawling, otherwise termed urban growth or urbanization, with attendant consequent alteration in land uses and building pattern.

The growth trend of Akure is not in any way different from this projection as the population has been more than tripled of what it used to be before it became the state and local governments administrative headquarters. This has brought ineffable changes on the physical landscape, infrastructural development and building characteristics in the city. The thrust of this paper, therefore, is to investigate the upshot of sprawling prevalence in the city on pattern of land use changes and building characteristics in the region with a view to providing information that will aid policy formulation towards the physical planning of the area.

2.0 Literature Review

The trend of urbanization in Nigeria antedated British colonization. Historically, it is favoured by rapid rate of migration from rural countryside to urban areas, natural increase through birth, and ever changing socio-political and economic structure of the country (Oduwaye, 2015). Consequent upon this, urban land use had been increasingly subjected to changes in different forms, sorts and types since urban explosion of the 1970s. The major dynamics of urban land use changes in Nigeria was observed in the first epoch between 1972 and 1984 (Fabiyi, 2006). That was the period when the economic development of Nigeria was in its highest peak before the downturn in the mid-eighties. The sprawl developments that featured prominently in the second epoch are in form of shanties and ramshackle buildings. People move to cities *en-masse* from the rural hinterland in anticipations to enjoy the benefits of urban economy. Most Nigerian cities are not planned; thus, they did not prepare for the upsurge of urban explosion that came thereafter which resulted in human decadence.

Fabiyi (2006), in his work on urban land use change analysis, seeks to evaluate urban temporal changes in a typical traditional settlement in Nigeria. Taking the city of Ibadan as a case study, he employed the techniques of remote sensing to evaluate land use and land cover changes to make a projection into 2023 with the aid of Markov chain model. In the study, he made use of density classification and the change rate in correlation analysis to identify a relationship between the density types at the base year and the rate of change in the period of study. Findings revealed considerable dynamic changes in Ibadan metropolis with vegetal cover, low density and sprawl development as the major contributors to the change. There were growths by fission in the high density areas with the catchment area for rivers as locations for urban spatial growth or change. Undoubtedly, the results of the spatial operations and analysis reveal the spatial dynamics of the urban land uses in Ibadan metropolis. According to him, developments at the peripheries were not significantly different from types of housing in the core areas and the transition zones, which is simply a reflection of low economic growth and high involvement of informal sector in housing supply during the early transition in the city. The contribution of state and corporate private sectors in housing provision during the second epoch (1984-2003) was very negligible; only limited to the institutional areas and government secretariats. Majority of the housing stock in the city were supplied by the middle-income homeowners. All available open spaces in the city and the peripheral areas were built. Consequently, areas classified as low-density areas gradually becomes high-density areas later on. The growth dynamics also reflect the absence of state control on pattern of land use and building activities; hence, slum-like development could be found in every part of the city.

The work of Eludoyin, Wokocha and Ayolagha (2011) assessed the spatio-temporal land use and land cover changes for Obio/Akpor Local Government area of Rivers State, Nigeria between 1986 and 2000. The land-sat image resolutions of both 1986 and 2000 were used to capture the

seven land classifications that were identified in the area, which include farmland, built-up area, water, sparse vegetation, primary forest, secondary forest and mangrove. The study revealed that farmland, mangrove, primary forest and sparse vegetation reduced over time by 45.34%, 37.06%, 43.06% and 8.09% respectively while secondary forest, built-up area and water increased by 5.88%, 74.55% and 3.43%, respectively. It also affirmed that primary forest has the probability of 18.6% to change to built-up area. It was recommended among others, therefore, that laws should be promulgated to prevent unlawful expansion of construction of any form and that residents of the study area should be enlightened and educated on the effects of deforestation on their environment.

In Lagos, Adebayo (2010) posited that change in any form and in any society is inevitable, which has become part of urban growth. For economic reasons, land and buildings will continue to change in use from lower order to higher order status in order to attain optimal uses. His study took a closer look at the impact of land use changes on property values in Victoria Island area of metropolitan Lagos. Data obtained from sampled respondents, randomly selected for interview, were analysed with the use of simple descriptive statistics; particularly frequencies, percentages and ratios. His findings showed that there have been remarkable changes in land use pattern from residential to commercial which had led to corresponding changes in property (building) values in the area. Meanwhile, changes in the use also created problems, such as traffic congestion, over stretching of infrastructural facilities and noise pollution, among others. Therefore, there is need for adequate proactive land use planning to take care of the changes brought about by increased commercial activities. Besides, there is need for town planning authority to monitor the process and pattern of changes with a view to prevent the possible negative effects on the environment.

Similarly, Oduwaye (2013) in his study on changing land use structure of metropolitan Lagos, affirmed that change has many effects or implications on land use prospects of any city. He

argued that the nature of the implication manifests in various shades of socio-economic, physical and environmental dimensions. In a related work he carried out on urban planning implication of changing land use structure of metropolitan Lagos (Oduwaye, 2015), he discussed the nature of the changes and their implications on land use types namely: residential, commercial, industrial, educational and institutional, religious, circulation, parks and recreational land uses. With the application of factor analysis and principal components analytical techniques, he realized infrastructure and economic dynamics as major factors influencing land use in Lagos with high level of correlation between them. Consequent upon this was the significant distortion of Lagos Metropolitan Master Plan that led to the unforeseen physical land use problems in the city.

The above submissions were corroborated in the work of Olofin (2012) and Owoeye (2019) who argues that urban sprawl poses serious challenge to food security as most agricultural lands used for food production are taken over by physical developments like building constructions and infrastructural provisions. Such developments lead to shortage of food production and supply which, consequently, encourage rural poverty. Oyinloye (2013), Balogun *et al* (2011), and Owoeye (2016) observe that the rate of growth in Nigeria is much more rapid than it was in England and America some years back. While the growth in these two countries followed industrial revolution, that of Nigeria is motivated by socio-economic factors; most especially, the strong urge to enjoy improved amenities and quest for gainful employment opportunities in urban centres. This results in emergence of various socio-economic problems like housing shortage, joblessness, traffic congestion and high demand for transport facilities in urban centres. It also results in shortage of food production, due to able bodies in rural areas migrating to cities in quest for greener pasture and urban life. Owoeye (2016) specifically observed massive distortions in urban housing system; especially, at city centres where most residential buildings are being converted to commercial (or mixed) uses in an attempt to diversify source of income generation.

Two important features mark the growth of Nigerian urban centres. The first is the intensification of land use with resultant modifications to the urban spatial structures within the already built-up parts of some cities. The second is the outward spread of the built-up areas of urban centers into rural hinterlands (Omuta and Onoekerhoraye, 1994; Balogun *et al,* 2011; Owoeye, 2016). According to them, the intensification of land use in urban areas of Nigeria is a large feature of the pre-colonial urban centres. The process is an outcome of the pre-colonial pattern of land use in cities coupled with social changes and rapid growth after the establishment of British colonial rule. They argue further that the growth viewed by the outward expansion of the built-up area contributed largely to the evolution of the contemporary land use pattern in most Nigerian rural areas and cities. The continuous growth in this pattern has led to serious congestion in already built-up areas with physical expansion into adjoining rural neighbourhood.

3.0 Materials and Methods

3.1 Research Site

The study focused on Akure city and its environs. Akure is a notable city in the South-western Nigeria which became the capital of Ondo State on February 3rd, 1976. It is located between Latitudes 7^0 15^1 and 7^0 28^1 North of the Equator and between Longitudes 5^0 6^1E and 5^0 25^1 East of the Greenwich Meridian. It is about 311 km north-east of Lagos and 323 km south-west of Abuja, the Federal Capital Territory of Nigeria. Akure town spreads over an area of about 15,500 km^2 in about 370m above the sea level. Its population figure by the National Population Census (NPC, 1963) was just 71,106. With the influx of public servants into the town consequent upon the state creation in 1976, the population rose to 239,124 and 360,268 in 1991 and 2006 respectively (NPC, 1991 and 2006). Its projection to the current year 2020, using 3.2% projection rate, is approximated at 559,940. Figure 1 describe the geographical location of the study area; both in

the national and local settings. However, the scope of the study covers Akure region which include: Akure municipal, its peri-urban areas and the adjoining settlements.

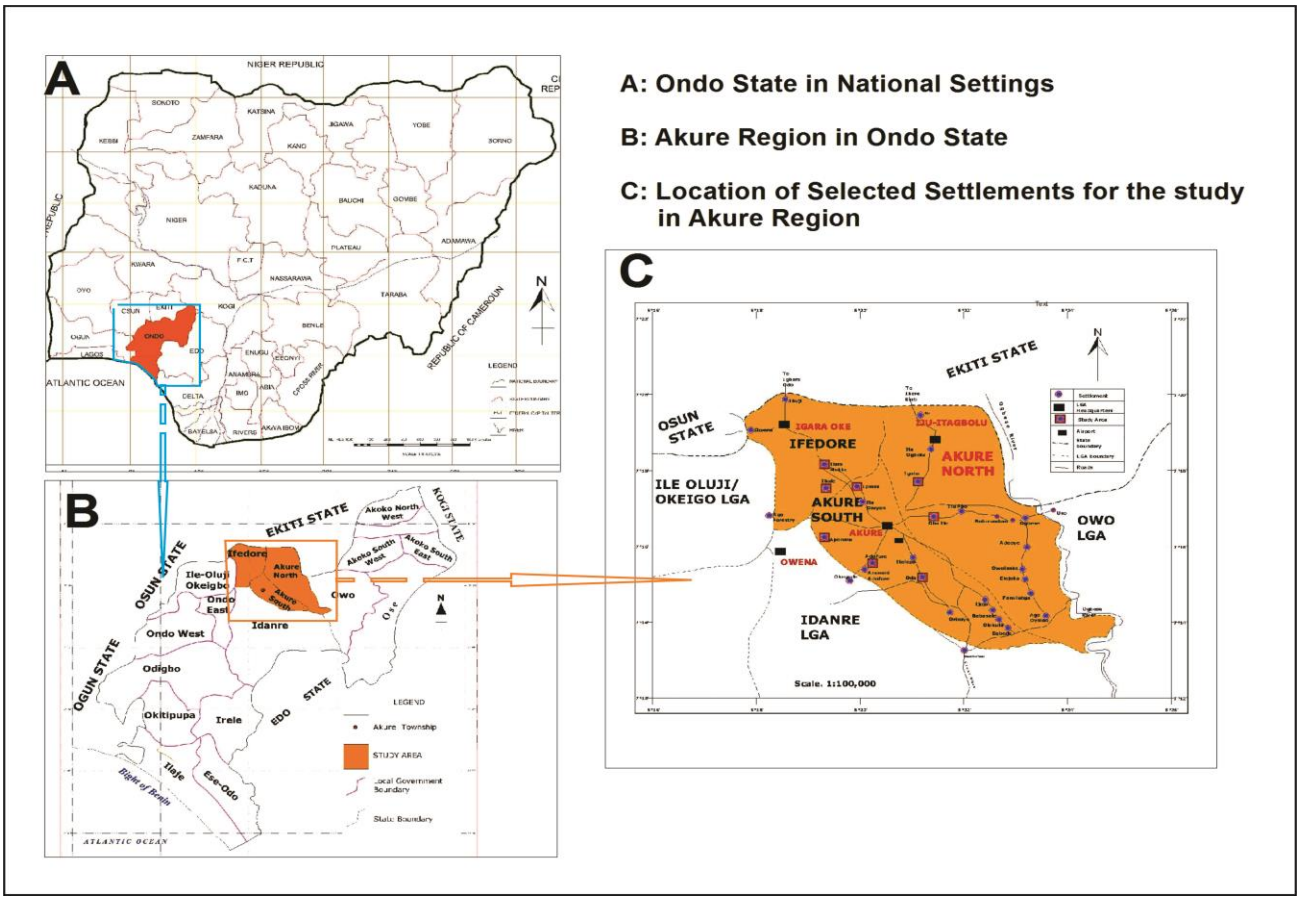

Figure 1: Locational Maps of the Study Area (Akure Region)
Source: Owoeye (2019)

As shown in Figure 1c, eight adjoining settlements were randomly selected within a range of 5-10km commuting radius away from Akure city centre. They include Ilara-mokin, Ibule-soro, Ipinsa, Igoba, Oba-ile, Oda, Adofure, and Aponmu. These fall within the three Local Government Areas (LGAs) that constitute Akure Region; i.e. Akure South LGA (Ipinsa, Oda, Adofure and Aponmu), Akure North LGA (Igoba and Oba-ile), Ifedore LGA (Ilara-mokin and Ibule-soro). The study investigated the effect of Akure urban expansion, being the state capital, on its adjoining communities within a period of 30 years (1985 - 2014). The region has unified characteristics that keep them together, among which include language, socio-economic attributes and cultural

background. Thus, the region has homogenous characteristics that unify the settlements as a region.

3.2 Research Data Base

Data collection for this study was essentially through Survey Research Design (SRD) with the aid of structured questionnaires, interview, personal observation and photo-snaps. Other sources include government ministries and establishments where historical milieu, base map and population data used for the study were obtained. Basically, the study area was disaggregated into three zones - the urban core, the transition zone, and residential estates cum urban peripheries. A report on Integrated Household survey conducted by the Ondo State Bureau of Statistics (ODSB, 2012) established 5persons per household and 5households per building in urban areas of the state. With this, the total population projected for the three zones in Akure urban estimated at 476,159 in 2014 was estranged into 95,232 households while the total population of 73,972 in the eight adjoining settlements selected was placed at 13,794 households. From this, a sample size of 1% was taken for questionnaire survey, which amounted to 952 in Akure urban and 138 in the adjoining settlements respectively. These were randomly administered in a succession of 10^{th} buildings to a household-head per building. Meanwhile, 818 copies of questionnaire were retrieved in usable form out of 952 that were distributed in Akure urban and 129 in the selected settlements. These were used in the analysis for the study through appropriate statistical tools. ANOVA test was conducted to determine the relationship between the two variables.

4.0 Result and Discussion

Results on the effect and interaction of urban sprawl with land use change and building characteristics in the study area is presented and discussed under different subheadings:

4.1 Descriptive Statistics on Land Use Pattern and Building Characteristics

A descriptive statistic was used to determine the level of variance in the original purpose of land acquisition (PURAQ), purpose of building (BDGPUR) and alternative uses of building (ALTBDG). The result of this is illustrated in Table 1. From the table, the percentage of land area acquired for residential purpose accounted for 89.0%, commercial (6.5%), agriculture (3.3%), institutional (1.1%) and other land uses (0.1%). The table further reveals the original purpose for which the buildings were constructed. About 68% were originally built for residential purpose while 24.2% were meant for mixed-uses and 6.6% for commercial purpose; only 0.6% is meant for institutional purpose. With investigation made on alternative uses of buildings in the area; over 40%; especially, residential shared with other land uses, aside the 24.2% that were originally meant for mixed-uses. Examples of this litter the city where most residential buildings; especially those along the major roads, are also used for commercial purposes.

Table 1: Descriptive Statistics on Land Use Pattern and Building Characteristics

Variables	Frequency	Percentage
Original Purpose of Acquisition (PURAQ)		
Residential	728	89.0
Commercial	53	6.5
Agriculture	27	3.3
Institutional	9	1.1
Others	1	0.1
Total	**818**	**100.0**
Building Purpose (BDGPUR)		
Residential	553	67.6
Commercial	54	6.6
Industrial	7	0.9
Institutional	5	0.6
Mixed	198	24.2
Others	1	0.1
Total	**818**	**100.0**
Alternative Uses of Building (ALTBDG)		
Yes	390	47.7
No	428	52.3
Total	**818**	**100.0**

Source: Field Survey (2016)

4.2 Kruskal-Wallis (H) Test on Changing Land Use and Building Patterns in Akure

The calculated χ^2 value of H-statistical test done to assess the significant association between Land Use Changes and building characteristics in the study area is shown in Table 2.

Table 2: Kruskal-Wallis (H) Result of Land Use Variables and Building Characteristics

Association	χ^2 Cal.	χ^2 Tab.	Df	P-value	Decision
BDGPUR vs. BDOWNER	15.081	9.488	4	0.005	S
BDGPUR vs. TENTYPE	8.104	9.488	4	0.088	NS
BDGPUR vs. PURAQ	272.855	9.488	4	0.000	S
BDGPUR vs. YLDAQ	29.678	9.488	4	0.000	S
BDGPUR vs. YBERECT	32.790	9.488	4	0.000	S
BDGPUR vs. BDTYPE	5.222	9.488	4	0.265	NS
BDGPUR vs. SZBPLOT	5.849	9.488	4	0.211	NS
BDGPUR vs. BDGCON	21.688	9.488	4	0.000	S
BDGPUR vs. WALMAT	33.610	9.488	4	0.000	S
BDGPUR vs. WALCON	5.983	9.488	4	0.200	NS
BDGPUR vs. RFGMAT	4.425	9.488	4	0.352	NS
BDGPUR vs. RFGCON	38.645	9.488	4	0.000	S
BDGPUR vs. NUMRM	12.275	9.488	4	0.115	NS
BDGPUR vs. SBDFIN	40.805	9.488	4	0.000	S
BDGPUR vs. BDMAINT	64.189	9.488	4	0.000	S
BDGPUR vs. ALTBDG	67.056	9.488	4	0.000	S

S = Significant **NS** = Not Significant at 0.05 alpha level.

Grouping Variable: Building Purpose (BDGPUR)

Source: Field Survey (2016)

As shown in the table, sixteen variables that depict building characteristics were examined out of which ten show significant relationships with building purpose (BDGPUR) at 0.5% alpha level. The remaining six variables involving tenure type (TENTYPE), building type (BDTYPE), size of building plot (SZBPLOT), condition of wall (WALCON), materials used for roofing (RFGMAT) and number of rooms per building (NUMRM) which do not have significant association with building purpose (BDGPUR) were expunged in the subsequent analysis conducted to validate the

level of significant association between pattern of land use change and building characteristics using ANOVA test. The result is shown in Table 3 where F-value of 7.022 is significant at 0.000 alpha levels with a mean score of 11.487. Hence, the null hypothesis was rejected to affirm a significant association between changes in land use pattern and building characteristics in Akure region. This corroborate the findings in Owoeye and Omole (2012) in their study on housing condition and environmental quality in the core area of Akure. In the study, it was strongly affirmed that rambling and incompatible change in land use often result in deterioration and poor state of the environment with negative consequences on housing condition that affect the efficiency of residents.

Table 3: ANOVA Test on Land Use Variability and Building Characteristics in Akure

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	114.865	10	11.487	7.022	.000[a]
	Residual	873.527	534	1.636		
	Total	988.393	544			

a. **Predictors: (Constant)**, ALTBDG, MATWAL, SBGFIN, PURAQ, BDMAINT, BDOWNER, YLDAQ, CODROOF, YBERECT.

b. **Dependent Variables:** Building purpose (BDGPUR)

Source: Field Survey (2016)

4.3 Impact of Urban Sprawl on Changing Land Use Pattern in Adjoining Settlements

Consequent upon massive expansion experienced in the city, the impact extended to various adjoining settlements. The level of impact of this expansion was examined on eight (8) sampled settlements surrounding the city using descriptive statistical tool as shown in Table 4 and Figures 4 - 9. As illustrated in Table 4; 97.7% respondents in the adjoining settlements noticed that Akure urban expansion has some influences on their communities while only 1.6% seems not to recognize any impact. Various impacts noticed by the respondents are either negative or positive. The negative impacts ranged from lack of labour for farm work (as identified by 62% of the

sampled respondents) to conversion of rural lands to urban land uses (24.0%). It also includes congestion on few available facilities in the communities (7.0%), as well as, incessant crimes in the adjoining communities (5.4%).

Table 4: Influence of Sprawling Incidence on LUC in Adjoining Settlements

Variables	Frequency	Percentage
Notice of Influence of Sprawling Incidence		
Yes	126	97.7
No,	3	2.3
Total	**129**	**100.0**
Problem Emanated from Sprawling Incidence		
Incessant Crime	7	5.4
Conversion of lands to urban land uses	31	24.0
Lack of labour for farm work	80	62.0
Congestion on few available facilities	9	7.0
Others	2	1.6
Total	**129**	**100.0**

Source: Field Survey (2016)

The major areas of positive influence, as shown in Figure 4, centers on increase in the level of civilization (37.2%), high cost of living (25.6%), increase in housing demand (20.2%), as well as, provision of urban facilities (16.3%). The level of accessibility to urban services in the adjoining settlements was equally examined. This is done to ascertain the level of availability of essential services for the consumption of the people in those communities. As revealed in Figure 5; electricity has the highest level of accessibility in all the eight selected settlements as indicated by 39.0% of the sampled respondents. This was closely followed by roads (35.0%) and schools (14.0%), as well as, clear communication network (9.0%). Only 3.0% has accessibility to water supply; most especially, Oba-ile and Ilara-mokin.

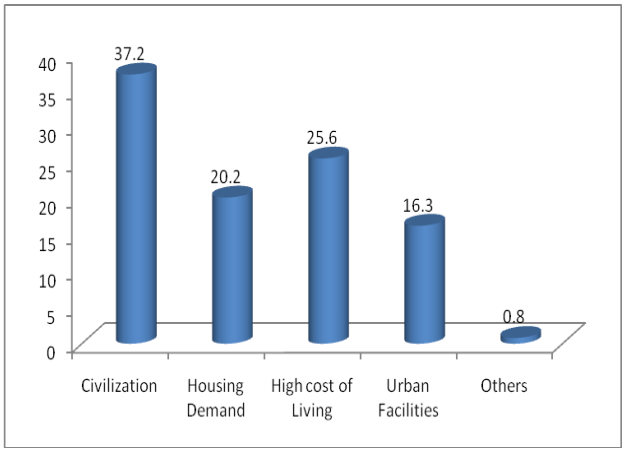

Figure 4: Area of Sprawling Influence

Source: Field Survey (2016)

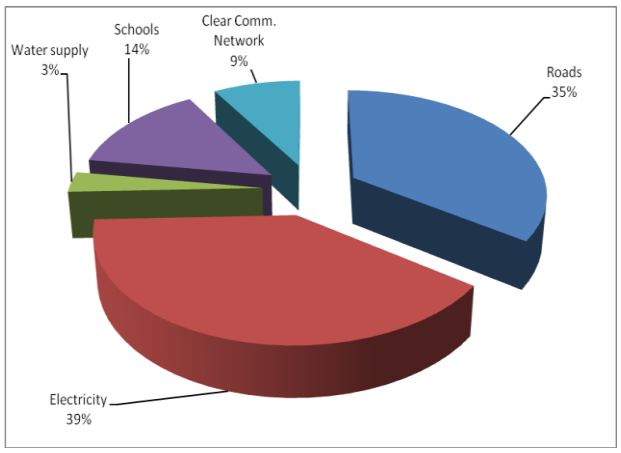

Figure 5: Accessibility to Urban Services

Source: Field Survey (2016)

In many of these settlements, housing rent has increased tremendeously, as well as, land prices. Due to urban expansion emanated from the city centre which made cost of house rent and plots of land rise astronomically, the demand for housing units and lands for residential, industrial and commercial purposes in these adjoining settlements has also increased. Hence, the level of income for land owners and landlords increased correnspondingly. However, now that the present covid-19 pandemic is being speculated of having possible downturns on global economy, it therefore becomes imperative to investigate condition of housing facilities and social infrastructures within the city, at the peripheries and in the adjoining communities with a view to forstall possible future condition and to profer measures to remediate the effect of unguided expansion in the region. The pictorial representation of current status of urban outlook, infrastructure conditions and building patterns in the study area is shown in figures 6-9.

Figure 6: Physical Condition of most newly constructed buildings at the urban peripheries of Akure
Source: Field Survey (2019)

Figure 6 *illustrates typical examples of newly built houses in Ipinsa community at the urban periphery. As shown in the plate, the buildings were yet to be completed with necessary fittings (like windows, ceilings, plastering, wiring, plumbing and other household fittings) before they were occupied. Reasons for this includes high cost of land prices, series of intimidations mounted on tenants by landlords and varoius other difficulties faced in securing accommodation at the city centre, which prompted such individuals to move into their uncompleted buildings.*

Figure 7: Ondo State Staff Development Training Institutes at Ilara-Mokin.
Source: Field Survey (2019)

Figure 7 *is Staff Training Institute located at Ilara-mokin at the Akure suburb by the Ondo State Government due to its proximity to Akure. It was primarily aimed at decongesting the state capital and to equally be used as regional development scheme to upgrade the suburb.*

Figure 8: The Akure-Obaile Road Dualisation Project
Source: Field Survey (2019)

Figure 8 *shows road dualisation project along Akure-Obaile. Initially, when it was a single lane, traffic was very difficult due to high rate of influx received from the community into Akure daily. Most government workers and other individuals working in Akure reside in the community; hence, they ply the road every day, thereby generating high traffic flow on daily basis. The extension of the road therefore becomes necessary to ease vehicular movement along the axis. The project was completed and commissioned in 2017.*

Figure 9: Sunshine Housing Estate along Akure - Ilesha Road, Ibule-soro
Source: Field Survey (2019)

Figure *9 is the Sunshine Estate that was originally constructed by the Ondo State Government (ODSG) to provide residential services (like site-and-service and affordable rent) for people who could not secure accommodation or purchase land in the city centre. But observation and personal interviews with respondents revealed that people could not secure the property due to exorbitant price of the property. Currently, it is being used by the Federal University of Technology, Akure (FUTA) as Centre for Entrepreneurship and mini-campus for the Pre-degree program (a business and academic venture). This is at variance with the original purpose of acquiring the land and construction of the property.*

5.0 Conclusion and Policy Recommendations

The study examined the impact of urban sprawl on changing land use pattern and building characteristics in Akure and its adjoining settlements between 1985 and 2014. It also examines the current situation of facilities development with a view to providing information that will help policy formulation towards the physical planning of the region. The study gives a clear indication of unguided expansion in the growth of Akure which particular reference to land use change pattern and building characteristics in the city and its surrounding settlements. Investigation made on level of variance in the original purpose of land acquisition (PURAQ), building purpose (BDGPUR) and alternative uses of building (ALTBDG) revealed that larger percentage (89.0%) of landed area was acquired for residential purposes. About 50.0% of the buildings have alternative uses, most of which are found across the three zones. Such buildings are used for mixed purposes, contrary to the original purpose to which they were erected. Sprawling incidence in Akure urban is found having significant impact on land use changes, building pattern, the physical morphology and socio-economic status of adjoining communities. This contributes to raising the level of crime rate, provision of urban features and, as well, determines the settlement pattern in those communities. In this wise, larger percentage (97.7%) of sampled respondents acknowledged the impact of urban expansion on land use changes in their communities. These impacts range from reduction of labour for farm work, conversion of land uses from agriculture to provision of urban infrastructures, as well as, congestion on few available facilities in the settlements.

The unguided nature of Akure urban development whose effects on land use pattern are well prominent needs adequate attention. The check on this should commence with land acquisition and allocation for various uses, so as to guide against incompatible uses. This study, therefore,

recommends that Ministries of Lands and Housing, Urban Development and Physical planning should employ resourceful control measures over private and public land uses through effective zoning strategy. The Development Control Department in the Ministry of Urban Development and Physical Planning should be reinforced with strong tools to carry out their duties in this regard, particularly, in the area of effective monitoring and enforcement of planning standards for sustainable development.

Without any doubt, the administrative status of Akure has generated much attraction of influx of people into the city. The impact of this on the city and its adjoining communities has been very great. Hence, the introduction of regional development programs will go a long way to curb this scenario. Local government headquarters and other major towns around the city should be reinforced with functional basic facilities to curtail the incessant inflow of people from towns and villages into the state capital city. This is one of the basic principles adopted in urban development policy framework in developed countries of the world.

Author Contributions

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Conflict of interest

The author declares no conflict of interest.

Data availability statement

There is no extra data attached to the manuscript.

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