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Spatio - Environmental Dimension of Residential Landuse Change Along Taiwo Road, Ilorin, Nigeria

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Keywords: *land use, environmental dimension, spatial pattern.*

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I. Introduction

Human existence and survival has witnessed series of changes and transitions over time. This is especially evident in the trend and pattern of the global demography which ranges from a mega scale of temporal increase in global population, to the micro level of variation in the distribution of population across continental and developmental lane. Human environmental dynamics is based on three critical dimensions: time, space and decision making (Bello and Arowosegbe, 2014). It reflects success of various stages of human adaptation processes, globalization and technological advancement evidenced in reduced mortality, increased fertility, and increased in birth rate among others. *It took hundreds of thousands of years for the world population to grow to 1 billion – then in just another 200 years or so, it grew sevenfold. In 2011, the global population reached the 7 billion mark, and today, it stands at about 7.3 billion (UNFPA, 2016).* This dynamics has not left out the urban- rural dichotomy as the current estimate of the United Nations revealed that the globe is now an urbanised haven. *In recent years, the world has become more than one-half urban for the first time in history (54.5 percent in 2016)……more than 70 percent of the world's population lives in urban areas with less than 500,000 residents or in rural areas. Approximately one quarter (23.9 percent) of the world population lives in urban areas of 1,000,000 population or more. Less than 30 percent (28.6 percent) lives in urban areas with 500,000 or more population. More than 70 percent of the world's population lives outside urban areas with 500,000 or more residents (*Demographia World Urban Areas, 2016) The continuous efflux of migrants of diverse socio economic characteristics as well as their associated factors is not the focus of this paper but their continuous dependence on usually limited and high competitive urban resources is the orient to which this paper points.

Land is one of three major factors of production in classical economics (along with labour and capital) and an essential input for housing and food production. (JunJie Wu, 2008). Despite its advantageous and life supporting characteristics, human unguided use of land has altered the structure and functioning of ecosystem (Fabiyi, 2006). Land, like every other resource in the urban area is usually of limited supply, high demand thus exorbitant price. Hence uses align themselves within the highly competitive urban space based on their ability to afford the price in anticipation for optimised returns. However, since urban centres grow usually out of existing rural or sub urban centres with dependence on another urban area, landuses in urban centres in their pre-urban times are usually residential. However, as the economic value of land increase possibly through the introduction of social services (e.g roads, schools, administrative) or growth pole factors (such as

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industries among others) uses which cannot afford the economic requirement of these lands, transits to new uses that can afford it. This is conceptualized by (McGranahan et al, 2005) as global environmental change These changes which is inclusive of transition in urban landuse patterns stands to reflect the response of landusers to a number of institutional, economic, social and biophysical factors affecting transactions in land and the physical process of construction of buildings. It is worthy of note that these factors are usually interwoven, interactive and complicated. Decisions relating to landuse transitions interact at different organizational levels, and in a dynamic way to produce complex patterns of urban landuse (Ademola, 2006).

Landuse changes are common phenomenon in any spatial development process. It is a necessary ingredient for economic development and social growth (JunJie Wu, 2008). It reflects man's thinking and survival attempt over time. For instance, globally, evident landuse changes are transition from agricultural land to built-up Area. While transition can take other patterns, its rate in urban centre is usually sporadic and evident. Infact, Yuri, (2009) observes that the most landuse transition in urban areas is from residential land use possibly to commercial land use. In some other cases to accommodate both previous use (residential) and new use (commercial), mixed development are usually introduced. These uses sometimes are usually not compatible especially with increase in the scale of commercial activities which can lead to environmental challenges for both land users. These challenges include air pollution, theft, noise pollution emanating from generators and other activities. Indeed, Landuse changes does not come without cost (Jun Jie Wu, 2008). Conversion of residential land use to another in Nigeria is a reflection of poor enforcement of the existing planning regulations (Olusina, 2008).

Taiwo road as the core of Ilorin Metropolis is not excluded from the scenario painted above as mere observation of the buildings along these roads show a complex interwoven pattern of residential, commercial and mixed development in no particular observable spatial order. Since the occurrence of landuse changes brings about questions on how the occurrence of land use changes took place and what are the strong factors that cause them to happen (JunJie Wu, 2008; Owoeye and Ogunleye, 2015), it is necessary to understand the change process in cities; its agent and beneficiaries which can be useful indicators in planning for functional cities (Fabiyi, 2006). It is against this background that this study evaluates the spatio- environmental dimensions of residential land use conversion along Taiwo road in Ilorin Metropolis with the aim of proffering recommendation that will aid the achievement of sustainable urbanization in the area.

II. Literature Review

The concept of landuse change has been widely researched (Hald, 2009; Abiodun et al, 2011; Ogungbemi, 2012). Landuse Changes is the change of the use of land or buildings there on for a purpose which is different from that for which the land or building was originally zoned and intended for as Change of use as a concept tiptoed into development control arena by the fact that it is now regarded as development following an official endorsement or approval of the relevant development control department for any land development (Hald, 2009).Thus, change in use is occasioned by number of factors. Such factors are mostly, economic in nature (Ogungbemi, 2012). Landuse Change is an indirect consequence of economic growth (Fabiyi, 2006). It is a reflection of the eventual decision of landowners dependent on the expected value of each option to the owner (Owoeye and Ogunleye, 2015). It is any development or use which is different from the use last approved by the planning authority while he described material change in use as the physical alteration of existing zoning conforming structure. Earth surface is being significantly altered by man and this has had a profound effect upon the natural environment thus resulting into an observable pattern in the landuse over time (Abiodun, Olaleye, Dokai and Odunaiya, 2011).

Man continues to explore and exploit the natural resources in his environment and this has brought immense contribution to observable changes in land. Human alteration of the terrestrial surface of the earth are unprecedented in their pace, magnitude and spatial reach, of these, none are more important than changes in landuse and landcover as this has altered the structure and functioning of the ecosystem (Fabiyi, 2006). The magnitude of land use change varies with the time being examined as well as with the geographical area (Abiodun et al 2011). The assessment of these changes depends on the area, the land use types being considered, the spatial groupings, and the data sets used. In order to effectively address the issue of landuse changes process, a well-founded knowledge of underlying causes and driving forces is need (Rima, 2011; Oduwaye, 2015 both cited by Owoeye and Ogunleye, 2015).

III. The Study Area

Ilorin in the North Central geo-political zone is one of the largest cities in Nigeria. The capital of kwara State was founded by the Yoruba, one of the three largest ethnic groups in Nigeria in the Year 1450. The centrality of Ilorin within coordinates $8^0$30'N $4^0$33'E makes it to be easily accessible to all parts of the country by air, road transport or rail. Ilorin occupies an area of about 100km^2(Oyegun, 1992).

Demographically, the first estimate of the population of Ilorin after the establishment of the British Colonial administration was made in 1911 and this put the population at 36,343. The 1953 census indicated the town's population to be 40,994. This plate rose to 208,546 in the 1963 census. The population census of 1991 put the population of Ilorin at 532,088. The plate was projected with the annual growth rate of 2.84 percent to be 606,533 in 1996 (National Population Commission, 1994). According to 2006 National population Census, Ilorin's population plate was put at 777,667people (National Population Commission Extract, 2006). Presently, Ilorin Metropolis cut across three Local government Areas, namely Ilorin West, Ilorin East and Ilorin South Local government Areas and it has about twenty political wards. Hence, in itself

The major land uses in Ilorin, Kwara state are residential, commercial, institutional, transportation and agricultural. The residential area covers 52%, transportation, 19%, while Institutional land use covers 12%. In the past, the land consumption rate in hectares of urban land use in Ilorin was about 0.0007, but increased to 0.006 in 1963, 0.007 in 1973 and reached 0.01 in 1982. This increase in land consumption rate indicates a new development in landuse pattern, which graduates with time, (Olorunfemi, 1981). In terms of the type and density of land use, these vary among the three local government areas in Ilorin (Kwara State Master Plan, 1990).

The traditional centre of the city (Oke – lele, Pakata, Adangba, Omoda, Ajikobi, Oloje, Gegele, Sanni-Okin, Eruda, Balogun Fulani, Alanamu, Ita – Adu, etc) comprises mainly old compound and tenement houses interspersed with block of flats all of high-density category. Medium density areas are found at Oloje, Kulende, Irewolede, Ganmo, Gaa-Akanbi, Elekoyangan, Taiwo Road, Polytechnic permanent site campus along Jebba roadand the Mandate estate. They are characterized by two, three and four – bedroom bungalows, and extensions and modifications to create extra spaces to accommodate more people. Low-density areas are found in the GRA, Adewole Estate, Sabo-Oke GRA,Ahmadu Bello way/Government House area, Asa Dam, Pipeline road, part of Unilorin permanent site area where the houses are mainly detached bungalows of two to five bedrooms, duplex and masionettes. Asa dam road, Gaa – Imam along Ajase – Iporoad and Western Reservoir road, the peripheral suburbs of new development comprising areas like Ogidi along Ilorin-Kaiama road to the west,Sobi Barracks, Alagbado along Ilorin-Shao road to the north and Agunbelowo, Olorunsogo, Odota, Eyenkorin etc. along Ilorin-Lagos road to the south west. Ilorin has many financial institutions which include Banks, Insurance Companies, Co-operative societies etc. and educational Institutions such as University of Ilorin, Kwara State Polytechnic, College of Education, School of Nursing and numerous Primary and Post Primary Institutions, Television Stations, Radio Station, etc. The commercial land use spread across the metropolitan areas of the city. The traditional Central Business Districts in Taiwo road, Unity road, Muritala Mohammed, Post Office and Challenge remains prominent in the city.

Source: Google Earth, 2016

Plate 1: Aerial Imagery of Taiwo road, Ilori

IV. Research Methodology

This study utilized a survey approach. Only quantitative data were obtained and utilized. Structured questionnaires were administered to residents located along Taiwo road in Ilorin Metropolis. To determine, the houses to be utilized for questionnaire administration, the spatial extent of Taiwo road was initially delineated on Google earth pro. Thereafter, buildings within 300 hundred meters on both sides of the road were further delineated and counted. Buildings within this delineated boundary were further stratified into 100 meters. Hence, three strata (A, B and C) were carved out of the delineated area. This was done to enable the determination of the distance decay effects of Taiwo road on landuse characteristics of adjoining land. In each stratum on both sides of the road, 15 questionnaires were administered to randomly selected buildings; in all, 90 questionnaires were administered. In each building, questionnaire was administered to the available oldest respondent (beyond 18 years of age). Information sought with administered questionnaires bothers on landuse characteristics of stratum, building conversion, causative factors as well as its environmental effects. Information obtained was subjected to both descriptive and inferential statistics. Descriptive statics utilized for the study includes measure of central tendencies (such as mean and standard deviation) as well as generation of weighted indices through linear interpolation of 5 point likhertscale for measuring of factors responsible for conversion of residential landuse. Pearson Chi square was used to evaluate the relationship between use of buildings across strata while Analysis of Variance was used to analyse the differences in the average annual rent of building across strata. Lastly, the relationship between building use and annual rent was assessed with the Analysis of Variance.

V. Discussion of Findings

This section explicitly presents the findings from field survey

a) Respondents Knowledge Of The Building And Area

This sub-section ascertains the level of respondent's knowledge of the historical pattern of the use of building being occupied. Also, it is believed that older respondents tend to be enriched with information that has to do with the landuse trend of the area. From Table 1, it is evident that 38.9% of the respondents has occupied there current buildings for about 10 years while less than 3% of the respondents has occupied their current building for a period lesser than a year. However, little proportion of the residents (4.4%) has resided in the building for more than 16 years. Others are 35.6% that has occupied their current buildings for almost 5 years, 18.9% that has occupied their buildings for almost 15 years. Generally, as revealed in Table 1, larger percentage of respondents has ample knowledge of the building they occupy. This is derived as an aggregate of above 50% of the respondents has lived in their buildings for more than 5 years. This makes the respondents a good historian of the landuse trend of the study area.

Table 1: Year of Occupation of Building

Year of Occupation	Frequency	Percentage
1 year and below	2	2.2
2-5 years	32	35.6
6-10years	35	38.9
11-15years	17	18.9
16 years and above	4	4.4
Total	90	100.0

Source: Authors survey, 2016

b) Building Characteristics

Landuse as defined in this context is building based. As the purpose for which a building is used determines the name of landuse to be allocated for it. For instance, building completely utilised for habitation is referred to as residential landuse, buildings utilised for transaction of business as well as other commercial dealings is conceptualized as commercial landuse Others are industrial landuse which are buildings utilised for production or/and conversion of raw material into semi- finished/ finished products. Meanwhile, mixed landuse which is predominant is Africa is a combination of two or more uses within a building (these may be complimentary or non-complimentary).

c) Plot Size

The Minimum plot size in the study area is 450 meter square while the maximum is 1800 meter square (Table 2). However, the average plot size for any development is 750 meter square. This informs that land availability is limited along this route hence

developments are structural rather than lateral. This is ascertained as the buildings of two storeys and above is dominant in the area (Plate 2 and 3). The Plot size of buildings in the study area did not differ from what is obtainable in different urban centres due to scarcity of land and its associated competition.

Table 2: Plot Size

	N	Minimum	Maximum	Range	Mean	Std. Deviation
plot size	90	450.00	1800.00	1350	756.3889	382.60199

d) Average annual rent of building

Predominately, the average annual rent of buildings in the study area (as revealed in Table 3) is within the range of N100,000.00 to N200,000.00. This implies that the monthly cost of a building will be within the range of N10,000.00 to N20,000.00. Infact, a good proportion (15.2%) of the sampled buildings annually cost beyond N500, 000.00. This is comparatively higher compared to buildings in other part of the metropolis where monthly cost of room is within N24 ,000.00 to N30,00.00 per month . The inability of residential landuse to afford this rent (due to their non-economical characteristics) makes them to automatically transit to uses that can afford their pay.

Table 3: Average Annual Rent of Buildings

Average annual rent	Frequency	Percentage
N100,000.00 and below	0	0
N100,001.00 -N200,000.00	38	42.1
N200,001.00 - N300,000.00	8	8.9
N400,001.00-N500,000.00	7	7.8
N500,000.00 and above	14	15.2
Total	90	100.0

Source: Authors work, 2016

e) Average annual rent of building across strata

From a descriptive perspective evident in Table 4, there is an obvious variation in the average annual rental values of buildings in the respective strata. For buildings within 100 meters, the average annual value is N748, 000.00 ± 1078701SD, this declined to an average annual rental value of N145,800.00 ± 15385SD for buildings within 200 meters to the road and a sharp fall in price to N79,993.00 ±37103SD for buildings within 300. This decline informs that there is difference in the cost of land and associated buildings with respect to their distance to the road. To ascertain the distance decay effect of road on the rental value of buildings in the study area, Analysis of Variance was used implored. This was used to evaluate the variation in the average annual rental value of buildings across stratum. From Table 5, the F value of 10.409 confirms that there is difference in the average annual of rent of buildings with respect to their respective distance to the road. The p-value of 0.000 which is lesser than the α-value of 0.05 ascertains that the variation as explained by the F- value is statistically significant.

Table 4: Average Annual Rental Value of Buildings across Strata

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
within 100 meters	30	748003.8760	1078701.57543	196943.06189	345210.0880	1150797.6640	1800.00	5.00E+006
within 200 meters	30	145800.0000	84271.07329	15385.72259	114332.6641	177267.3359	24000.00	450000.00
within 300 meters	30	79933.3333	37103.70679	6774.17906	66078.5815	93788.0851	32000.00	200000.00
Total	90	324579.0698	687964.33147	72517.80788	180487.7302	468670.4094	1800.00	5.00E+006

Source: Authors work, 2016

Table 5: Analysis of Variance Summary for Variation in Annual Rental Value of Buildings across Strata

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8133061759473.589	2	4066530879736.794	10.409	.000
Within Groups	33990186242851.996	87	390691795894.851		
Total	42123248002325.586	89			

Source: Authors work, 2016

f) Storey of Building

To optimise return from use of land especially at the sight of scarce land, developers in the study area depends on development of high rise buildings. (i.e storey buildings). This is inferred as all (100%) the sampled buildings are storey buildings (1.e buildings with more than one floor). However, as revealed in Table 6 and typified in Plate 2 and 3, 1 storey building dominates the study area as it accounts for 83.3% of the total sampled houses. This is distantly followed by 2 storey bui8ldings which accounts for 14.4% of the sampled buildings. Meanwhile a mere proportion of 2.2% of buildings in the study area is 3 storey while none of the building is 4 storey and above. The implications of this include increase in the density (human per space) of the area.

Table 6: Storey of Building

Storey of Building	Frequency	Percentage
No storey	0	0
1 storey	74	83.3
2 storey	13	14.4
3 storey	2	2.2
4 strorey and above	0	0
Total	90	100

Source: Authors work, 2016

Source: Authors work, 2016

Plate 2 and 3: Sets of storey buildings in the study Area

g) Previous use of Building

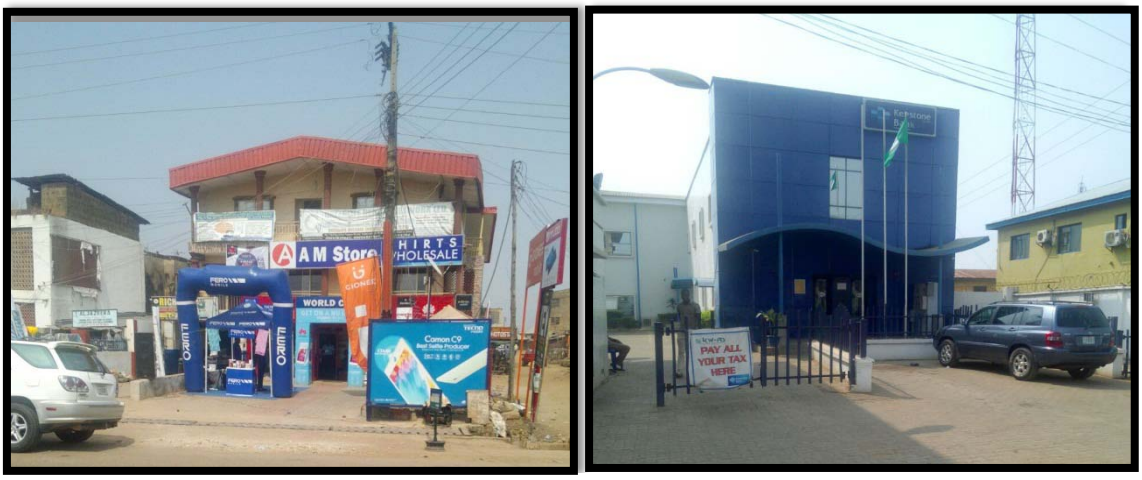
It is evident from table below that there are temporal changes in the use of buildings (invariably landuse) in the study area. Specifically, there is a change in the proportion of buildings converted from residential purposes to other purposes in the study area within the period of 10 years. In the year 2005, about 43% of the sampled buildings were used for solely residential purpose; this decreased to 25.5% in the year 2010 and further slide 16.6% in the year 2016. These buildings were converted for other uses which are mostly commercial and mixed uses. It is further revealed in Table 7 that buildings utilised for commercial purposes increased from 30% in 2005 to 36.6% in 2016. Conversion of buildings from residential to commercial which is evident in the study area reflects no cognisance of spatial planning. This is deduced as most of these developments (i.e conversion of use of building) were done without obtaining planning permits from appropriate town planning offices. As evident in Plate 4 and 5, residential building transition features conversion of rooms for warehouses, shops and stores among others while at the extreme reconstruction for commercial purpose. This scenario reflects development control officials negligence among others. Another use that has witnessed building gain is mixed landuse which usually is a mixture of residential landuse and commercial landuse (street trades and corner shops). This is a growing phenomenon in the study area as one can hardly see a residential building without one of its room converted for business purpose or its frontage used as display centres.

Table 7: Temporal Use of Building

Landuse	2005		2010		2016	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Residential	39	43.3	23	25.5	15	16.6
Commercial	27	30.0	25	27.7	33	36.6
Industrial	3	3.3	5	5.6	4	4.4
Mixed	21	23.3	37	41.2	38	42.2
Abandoned	0	0	0	0	0	0
Total	90	100	90	100	90	100

Source: Authors survey, 2016

Plate 4 and 5: Residential Building respectively converted to mixed and commercial land



Source: Authors survey, 2016

h) Use of building across strata

There is variation in the use of buildings across strata. The noticeable pattern is that dominant use within 100 meters to Taiwo road is Commercial landuse. This aside from physical observation is informed as (76.7%) of buildings within the area is solely for commercial purposes. Meanwhile as the distance increases from road network, there is high occurrence of other landuses (i.e residential and mixed). For instance, at 100 meters distance to road network, 10.0% of landuse is

committed to mixed development. This increased to 40.0% at 200 meters but declined to 23.3% at 300 meters. While the factor associated with mixed landuse decline in 300 meters away from the road is traceable to increase in the proportion of residential development (i.e 23.3%), developers or estate agents prefers to use buildings that are directly adjoining to roads for shops, as these use possesses optimised financial returns comparatively to other uses in the zone. The chi-square value of 12.38 reported on Table 8 informs that there is a variation in the use of land across strata; however, the p-value of 0.054 which is greater than the α-value of 0.050 implies that this variation is not statistically significant.

Table 8: Use of building across Strata

			use of building				
			residential	Commercial	industrial	mixed	Total
zone of area	within 100 meters	Count	4	23	0	3	30
		% within zone of area	13.3%	76.7%	0.0%	10.0%	100.0%
		% within use of building	26.7%	46.0%	0.0%	13.6%	33.3%
		% of Total	4.4%	25.6%	0.0%	3.3%	33.3%
	within 200 meters	Count	4	13	1	12	30
		% within zone of area	13.3%	43.3%	3.3%	40.0%	100.0%
		% within use of building	26.7%	26.0%	33.3%	54.5%	33.3%
		% of Total	4.4%	14.4%	1.1%	13.3%	33.3%
	within 300 meters	Count	7	14	2	7	30
		% within zone of area	23.3%	46.7%	6.7%	23.3%	100.0%
		% within use of building	46.7%	28.0%	66.7%	31.8%	33.3%
		% of Total	7.8%	15.6%	2.2%	7.8%	33.3%
Total		Count	15	50	3	22	90
		% within zone of area	16.7%	55.6%	3.3%	24.4%	100.0%
		% within use of building	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	16.7%	55.6%	3.3%	24.4%	100.0%

X2 = 12.38; p= 0.054

Source: Authors work, 2016

i) Factors responsible for Residential use conversion

This subsection examines the possible factors responsible for unguided conversion of residential landuses to commercial and mixed landuse. It is however worthy of note that these factors are systemic and organic. From Table 9, it can be deduced that that the major factor responsible for transition from residential use to other use is the presence of Taiwo road as it accounts for a deviation index of 0.20.The road which serve as both growth pole factor and transportation route has attract to itself different commercial landuses which compete for space to enjoy both access and mobile customers. This led to increase in commercial activities (0.15) such as banks, sales outlets which are able to afford the rental cost of land. The agglomeration of these commercial activities as well as their desire for enjoyment of its associated benefits make them to continuously increase thereby causing an increase in demand for commercial properties (0.002) as well as optimising investment returns (0.06) for developers and landlords who will prefer to convert the landuses to accommodate uses that can optimise their profits. It is however unfortunate that these takes place in the sight of poor development control (0.1) exhibited by physical planning experts and other urban gatekeepers in different government ministries. It is in response to these set of interconnected factors that residential uses fizzles out for both commercial and mixed landuses.

Table 9: Factos responsible for Residential Use conversion

S/N	Variables	Ratings					Factors Index					
		5 SA	4 A	3 U	2 D	1 SD	FWV	NR(F)	FWV/ NR (F)	X	D	D^2
1	Presence of Main Road	424	24	0	0	0	448	90	4.97		0.20	0.040
2	Increase in	357	84	0	0	0	441	90	4.90		0.15	0.029

	commercial activities											
3	Optimizing investment return	264	168	0	0	0	432	90	4.79		0.06	0.004
4	Meeting up with current economic reality	348	63	0	0	0	411	90	4.57		-0.16	0.026
5	Intra-Urban Migration	284	134	0	0	0	418	90	4.65		0.08	0.006
6	Increase in family size	67	344	0	0	0	411	90	4.57		-0.16	0.026
7	Increase in demand for commercial properties	411	12	0	0	0	423	90	4.71		0.02	0.0004
8	Poor Development Control	201	224	0	0	0	425	90	4.72		0.01	0.0001
TOTAL									37.88	4.73		

Source: Authors work, 2016

j) Environmental Dimension of Residential Landuse Conversion

This subsection examines the environmental implication of landuse conversion. From Table 10, it is evident that the predominant effect of residential landuse conversion in the study area is noise as it accounts for a weighted value of 4.64. Reportage of noise as an effect is not least expected as most of the commercial activities carried out in the study area (especially in mixture with residential landuse) generate noise. For instance, generators used at business centres and sales shop among others generate noise during the day. Another notable environmental effect is Lack of potable water (4.62). This situation is worsened as existing water supply facilities (government boreholes and public water works) have deteriorated hence water shortage is rampant. Due to this shortage, residents depend on purchase of water from private vendors (usually called mallams) or depend on well water around their vicinity. The seasonality of well water alongside questions bothering on its quality are issues that stares at the face of residents. Although, this is an amplified effect of other environmental problems such as housing shortage (4.15), High Occupancy ratio (3.95). As a result of these complexities, residents are faced with other environmental problems such as poor sanitation (4.59) and poor aesthetics (4.38).

Table 10: Environmental Dimension of Residential Landuse conversion

Factors	SA	A	U	D	SD	WMS	RANKING
Housing Shortage	50	16	10	0	14	4.15	9th
Poor Aesthetics	54	35	0	0	1	4.38	6th
Noise	65	22	1	2	0	4.64	1st
Waste generation	45	20	10	15	10	3.82	11th
Lack of Potable water	60	24	4	1	1	4.62	2nd
Poor road	30	10	2	35	23	2.99	12th
Poor drainage	45	28	0	0	17	4.20	8th
Poor Sanitation	63	18	1	2	6	4.59	4th
High crime rate	60	20	0	9	1	4.55	5th
High Occupancy ratio	52	5	4	0	19	3.95	10th
Air pollution	40	39	5	3	3	4.31	7th
Epileptic power supply	60	23	5	2	0	4.61	3rd

Note:Strongly Agreed=SA, Agreed =A, Undecided=U, Disagreed=D, Strongly Disagreed=SD

Source: Authors work, 2016

VI. Conclusion and Recommendation

From the foregoing, it is evident that there is an intricate relationship between urbanization, landuse change and environmental deterioration. This then answer in part rhetoric questions bothering on the situation of urban centres in Nigeria as haven of environmental ills, because, as urban centres become urbanised in the sight of unguarded development, environmental challenges emanates thereby creating more of problems than envisaged. While the environmental realities of urbanization (inclusive of landuse changes) continues to stare us in the face, how then do we ensure that landuse changes are carried out in the overall interests of advancing sustainable development? Also, how will sanity be restored to the economic viable Taiwo road in Ilorin? These can be achieved by the following.

1. *Awaness on the need of development Permit for Change of Use:* there is every need for massive awareness using several medium such as media prints, radio and television programmes on the need for development for every change of use. Education changes perception and attitude towards phenomenon, hence when developers and landlords are educated, their attitude will positively change.
2. *Environmental Impact of Project during Planning:* there is every need to extensively carry out environmental impact analysis of any social infrastructure (such as roads) before it is carried out. This will help in the fixation of systems and methods towards reducing or averting any potential environmental impacts of projects.
3. *Environmental Auditing:* Environmental audit of developments along Taiwo road should be carried out, this will help ascertain in quantitative terms, the extent of environmental damage (inclusive of landuse change) that has been done in the area. This will be the basis on which policy direction will be made.
4. *Establishment of Focused Relevant Government Agencies:* Government agencies such as Capital Territory/ Metropolitan Development Authority; Building Control Agency should be established in Kwara State with strict focus on the ensuring compliance with building codes as well as zoning in the metropolitan area. This agency when established should survey the study area, then proceed on resubmission of development plans for approval. Using this method, updated landuse information about the study area can be generated and control will be enabled.
5. *Development of Landuse Contingency Plan:* Since these development are more of irreversible (especially places where total conversion has taken place), contingency landuse plan for the study area should be developed to cater for the existing situation as well as chart a course for future landuse pattern of the metropolis.

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