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CHANGING URBAN LAND USE AND NEIGHBOURHOOD QUALITY: EVIDENCE FROM FEDERAL CAPITAL TERRITORY (FCT), ABUJA, NIGERIA

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ABSTRACT

Land use change in more recent times is becoming a natural phenomenon in cities of developing countries. Its causes and consequences were investigated with respect to FCT, Abuja, Nigeria. The responses of registered estate surveying firms (ESFs) practicing in FCT Abuja on the pattern of land use dynamics were obtained and analysed by descriptive statistics such as simple distribution frequency (SDF) and mean weighted score (MWS). Four major findings were discovered. Firstly, the predominantly changing land use were agrarian and residential, secondly the direction of change in land use revolves around public land use, residential, retail and office property with prevailing observations of new development and redevelopment involving renovations/rehabilitations and modifications/alterations. Thirdly the major determinants of land use change were identified as economic and spatial political factors and lastly the noticeable consequences had been arbitrary land/rental value, landscape distortion and pressure on urban infrastructure among others. The study recommended that policymakers and private stakeholders should encourage and adhere to land use control measures to strike a balance between economic development and land administrative system to foster a sustainable urban cities.

Key words: Urban-changes, Land-use, Causes, Neighbourhood-implication.

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1. INTRODUCTION

Land and its resources remain the basic element to the sustenance of the universe. The significance of land use in the physical, socio-political and economic growth in the development of cities cannot be overemphasized, hence the intrinsic value of land is perceived through the various uses that land is committed. Generally, land is broadly categorised into two namely rural and urban lands. Rural land is identified as remnants of land after urban land has been designated; they are predominantly lands committed to agriculture and extensively governed by local public authority (local government). On the other hand, urban land is any land which falls within the geographical areas of an urbanised environment. Land in urban areas is limited in supply, relatively scarce and command high value. However, [1, 3] posited that, the nature and pattern of land use dynamics in an urban environment is complex and interdependence.

Change in any form is a natural phenomenon, it is unavoidable and strongly correlated with urban growth of developing economies including Nigeria. Due to the key role of land in holistic national development, the rates, levels, directions and the dynamic implications of land-use-change has been a subject of academic discuss in recent times. [2] expressed that in the last five decades, the enormous changes in the pattern of land use either from one in to another or in the intensity of uses in cities globally. [3] grouped land use into four, namely wetland, shrub, cultivated and settlement, forest and grass land. [4] added natural barren, mined lands, mechanically disturbed and non-mechanically disturbed land use The directions of the changes were majorly from agrarian uses (such as forest, grassland) to building land; as a result of population and urban growths; the consequences had let to threats of the natural ecosystem [5, 6]

[7] opined that changes in the physical use of land will be continuous as a result of insatiable nature of man-land relationship and changes in optimal use (highest and best use). For instance, from economic view, land owners will behave rationally by conversion of low demand land use to competitive use in order to explore the economic opportunities associated with the unsatisfied demand of specific land use in the property market. Therefore the land owners are more concerned with the economic benefits rather than the spill-over effects of the conversion. Hence, the spatial use potential of land for the locating various interconnectivity activities is more stressed than the net production capability. The continuous desires at maximising economic returns as well as the urgent request to accommodating new physical re-development of spatial area by local planning authorities necessitates the changes in land use pattern. [6] posited that, understanding the factors responsible for changes in land use pattern provide needful information concerning the spatial implications and configuration on environmental quality, economic climate and well-being of the citizen both as present as well as in the future. [8] stressed that, one of the key focus of sustainable land development is quantitative evaluation approach to the effects of land use changes on environmental quality

Change in land use occurs majorly in two forms: conversion from one use to another and the modification of certain type of land uses. The former is concerned with changes in the mix pattern of land uses while the later involves changes in the intensity of use of a particular land majorly from underutilization to enhanced exploitation. [9] argued that changes in land use does not always leads to positive impacts on economic growth. In some cases, the

externalities of changes in the use of land can harded more harmful consequences than good especially where there is unplanned and uncoordinated land use conversion. Literature have documented both the positive and the negative externalities of the dynamism in land use. [1] identified the positive impacts to include enhancement in property value, complementary land use, increase in the supply of land for other use, encouragement of cooperative efforts towards better improvement of the entire community. On the other hand, documented negative externalities includes weakess in securing the immediate environment, stress of the extant infrastructure, overcrowding and ill-health of the vicinity. In a residential neighbourhood, negative impacts such as pollution, traffic congestion, destruction of neighbourhood layout, harmony and estate beauty have been identified. [9] added that those uncoordinated land use environment distort the original plan and poise a serious problem to planning authorities.

Illegal land use conversion is one of the many critical factors that determine the poor quality of the urban environment and by extension, impeding urban growth. This change constitute nuisance and may gradually hinder effective functions of both human and non-human activities in the neighbourhood. The resultant negative consequence tends to have adverse effect on the immediate environment. The motivation of the land use control agencies and private bodies can be triggered through investigation into the causes and impacts of land use conversion especially in uncoordinated manner which justified the urgent needs for this study.

2. LITERATURE REVIEW

Early studies such as [27, 10, 11, 12] summarised the definition of land use as simply the human employment of land. Similarly, [13] expanded the definition as the manner and the purpose for which the biophysical attributes of land are manipulated by man. With reference to urban land, the description of land use was specified to mean the mix of land use types, the particular pattern of these land use types, the area extent and intensity of use associated with each use types and the land tenure status. [14, 1] simplify the definition of land use to mean interconnectivity between human behavioural actions and structural factors such as demand for land, land capacity, technology, socioeconomic and ecosystem relations

Studies have viewed the pattern of land use dynamic from different dimensions based on disciplines. Agro-ecologists such as [15, 16, 17, 28] focused their works of land use change on tropical deforestation. [18] perceptions of land use change were from economic geography. [6, 19] views land use change pattern from natural sciences stand. In the resent times, [20, 21] empirical study were centred on technology-driven perspective of land use change patterns. However, the general assessment of land use changes have majorly centred on the causes/drivers and the impacts/consequences.

Researches have categorised the drivers of land use change to include biophysical, socioeconomic, spatial political and technological factors [4, 22, 29, 30]. Biophysical factors identifies location specific characteristic such as climatic conditions and soil geology (i.e. the suitability of the land for agriculture or accommodation types). [2] added eco-service factors such as hydrological adjustments, erosion, waste treatment and biodiversity. [1] added the physical fragmentation of land use. [23, 3] argued that man's manipulations of land were largely caused by socio-economic factors. [6] identified economic factors such as investment opportunities, marketability and credit facilities as the significant contributors to land use change pattern. [4] grouped urban growth and economic development as economic factors.

Social factors are individuals' cultural values, norms and preferences (lifestyles), financial, temporal and transport means. Population and demographical distribution such as age, sex, family size and structure including housing prices, quality of consumer service and

landscapes interactions were identified as part of spatial social indicators in the work of [24]. [25] opined that social spatial indicators influence the choices of individual's household actions and inactions in interacting with the usage of land and the pattern of the land use changes. Socioeconomic factors are concerned with the use of land to generate optimal economic returns [26]. Spatial policies were identified as factors characterised with government land management mechanism such as introduction or amendment of extant policies as well as pattern of enforcement.

On the other hand, implications of land use change have been documented in literature especially on environmental quality and sustainability. [25, 14] identified land degradation, desertification, biodiversity loss, habitat destruction and species transfer as consequences of converting natural land use. In the built environment, land-use-change implications such as overpopulation, pollution, traffic congestion, urban sprawl, physical plan and landscape distortions, pressure on infrastructure facilities, imbalance of land use, threat to security land, livelihood and properties. This study therefore sectionalises the drivers of the land use in FCT, Abuja into Biophysical, socio-demographical, economical and spatial political factors.

3. MATERIALS AND METHODS

3.1. Study Area

Abuja is the capital city of Nigeria located in the center of Nigeria within the Federal Capital Territory (FCT). Abuja is a planned city and was built mainly in the 1980s. It has a total land area of 713 square kilometers with coordinates $9^0$4'N $7^0$29'E. It has an average annual weather of 23^0C, Wind SW at 5Km/hr., 88% Humidity. It is a land locked area bordered by Nasarawa, Kogi, Kaduna and Niger States. According to Nigeria Demographics profile (2014), Abuja has a population of 2,153,000 people making it one of the ten most populous cities in Nigeria.

3.2. Materials

The study was carried out in the Abuja, Nigeria. Estate Surveying and Valuation Firms operating in the Abuja property market were selected as the study sample. The estate firms were chosen as a result of their primary engagement with activities in the property market of the local environment (Abuja). The study reasoned that, those firms practising in Abuja should be relatively more familiar with the property market including the land use pattern of the locality than other firms located outside the study area. Record of the NIESV Directory (2014) showed the total member of registered estate firms in Abuja to be 104. Field survey exercise was conducted and primary data were gathered through the use of self-administered questionnaire and personal observation instruments. Total Enumeration sampling technique was deployed. The level of agreement of the respondents on issues that border on levels, rate and modalities of land use dynamic, the drivers and the consequences of the changes on neighbourhood qualities were examined and analysed using descriptive statistics such as Simple Distribution Frequency (SDF) and Mean Weighted Score (MWS). The results were presented in Tables and Interpreted appropriately.

3.3. Methods

Mean Weighted Score (MWS) is expressed mathematically as follows

$$\text{Mean Weighted Score (MWS)} = \frac{\sum_1^5 R\ x\ W}{N}$$

Where:

R = Total number of responses on a particular scale on each parameter

W= Weight attached to each scale (ranging from 1 to 5)

N= Total number of responses on all scales for each parameter

The resultant mean values were then used to rank the parameters where appropriate.

4. RESULTS AND IMPLICATIONS

Table 1 presented the analysis of questionnaire administration. The study distributed 104 questionnaire to estate surveying firms (ESFs) practising in FCT, Abuja; out of which 74 (71.15%) were properly filled and retrieved. The high response rate can be attributed to high level of cooperation and level key interest in the subject matter of the study.

Table 1 Questionnaire Administration and Retrieval

Questionnaire Administered	Questionnaire Retrieved	Percentage (%)
104	74	71.15%

Author's Field Survey, 2018

Table 2 presented the analysis of profile of sampled ESFs operating in the FCT, Abuja. Multiple choice analysis on area of specialization showed that all the firms (100%) were providing services such as Agency, Property Management and Real Estate Valuation. In addition, 68.92% of these renders Facility management service, Portfolio Management (43.24%), Asset Management (36.49%), 35.14% of them provides Feasibility and Viability service while services that fall under 'others' category represents 14.86%. For property composition i.e. property types managed by the ESFs, 100% had residential, retail and office property types in their portfolio, 31.08% were managing industrial/Warehouse property, 17.58% undertakes recreational/resort property management, the management of 'others' properties such as public property, assets, real estate securities property accounted for 39.19%. Analysis on length of stay in Abuja property market showed that,71.62% had established and had been in practising in the Abuja for 6 to 10 years ago while the remaining ESFs (28.38%) has come into Abuja property market earlier (i.e. 11-15years). Analysis of the surveyor ESFs staff strength revealed that, 10.81% had less than 5 staff strength, 56.76% of them had staff strength ranging from 6-10, while 32.43% of them has up to 20 workers in their firms.

Table 2 Profile of the Estate Surveying and Valuation Firms (ESFs) Practicing in Abuja

Category	Parameters	Frequency	Percentage (%)
Areas of Specialization	Agency	74	100.00
	Property Management	74	100.00
	Real Estate Valuation	74	100.00
	Facility Management	51	68.92
	Portfolio Management	32	43.24
	Assets Management	27	36.49
	Feasibility and Viability	26	35.14
	Others	11	14.86
	Total	74	
Property Composition	Residential	74	100.00
	Retail property	74	100.00
	Office property	74	100.00
	Industrial/Workshop	23	31.08
	Recreational property	13	17.58
	Others	29	39.19
	Total	**74**	

Years of Establishment	<5yrs	-	-
	6-10yrs	53	71.62
	11-15yrs	21	28.38
	16-20yrs	-	-
	>20yrs	-	-
	Total	**74**	**100**
Staff Strengths	<5yrs	8	10.81
	6-10yrs	42	56.76
	11-15yrs	24	32.43
	16-20yrs	-	-
	>20yrs	-	-
	Total	**74**	**100**

On the other hand, Table 3 showed analysis of Age, Sex, Highest academic qualification, Professional carder and the respondents' designation. 39.19% of the respondents' age fall between 26-3years, 36.49% were within the age bracket 36-45years. The age bracket of 46-60years and above 60years accounted for 17.57% and 6.76% respectively. For academic qualification, 78.38% of the respondents had B. Sc./HND, 17.57% had M. Sc. and respondents with Ph. D. qualification accounted for 4.05%. Considering the membership cadre of the respondents in the study area, 36.49% were Associate member of the institutions (below 10years), 33.78% were Associates (above 10years) and 17.56% had reached the peak in the profession (Fellow) while only 12.16% were probationer/graduate members of the professional body. Investigation of designation of the respondents revealed that, 25.68% were principal partners, 28.38% were associate partners, 41.89% were estate surveyors designates while other junior office staff members accounted for 4.05%

Table 3 Profile of the Respondents for Estate Surveying Firms (ESFs)

Category	Parameters	Frequency	Percentage (%)
Age	<21yrs	-	-
	18-25yrs	-	-
	26-35yrs	29	39.19
	36-45yrs	27	36.49
	46-60yrs	13	17.57
	>60yrs	5	6.76
	Total	74	100
Sex	Male	51	68.92
	Female	23	31.08
	Total	74	100
Highest Academic qualification	OND/NCE	-	
	B. Sc/HND	58	78.38
	M.Sc	13	17.57
	Ph. D.	3	4.05
	Total	74	100
Professional Carder	Probate/Graduate	9	12.16
	Associate Below 10yrs	27	36.49
	Associate Above 10yrs	25	33.78
	Fellow	13	17.56
	Total	74	100
Position in the firm	Principal Partner	19	25.68
	Associate Partner	21	28.38
	Estate Surveyor	31	41.89
	Others	3	4.05
	Total	74	100

The summary statistics of ESFs and their respondents (Table 2 and 3) showed that all the ESFs engaged in providing core real estate services such as agency, property management and valuation also had in their firms' portfolio property types as residential, retails, offices. Properties such as Industrial/Warehouse property, recreational/resort (hotels) were managed by some ESFs. The least years of establishment and practice years of the ESFs in FCT Abuja was 7years on average, some firms has up to 15years in operation. 88.19% of the ESFs had staff strength of 8 to 13 on the average. Similarly, the profile of the respondents of the firms showed that they possess the required educational skills as 88.84% were professionally competent while more than 50% of the respondents has attained the post of partners in their firms. These result show the quality level of experiences with respect to real estate practice in FCT, Abuja and by extension, their contributions to local, national and international development of efficiency in the real estate sector. Therefore, the profile of ESFs exhibited evidence of reasonable length of stay and familiarisation with activities in the Abuja property market as competent respondents, hence the submissions and comments of the respondents on the matter of discuss will be quite reliable

Analysis in Table 4 presented the predominant changes in land use type in the study area. Five major land use types were examined namely agricultural, residential, commercial, bare land and public land uses. The analysis showed that, 41.89% of the respondents were of the opinion that the predominant changing land use was agricultural. 29.73% agreed on residential land use, 14.86% supported bare land use change while the least agreed changes were attributed to public (9.46%) and commercial (4.05%) land uses. The identification of agriculture land use as a major changing land use type in Abuja was supported by the comments of the indigenes when engaged in discussion. They explained that, Abuja was a typical agrarian area from time immemorial with its fertile land good for yam and melon cultivation. However, the relocation of the federal administrative house from Lagos to Abuja brought about tremendous changes to the physical, social and economic development of the area. Residential properties were also affected by the wave of changes as a result of the need to either enhance the investment potential of the building especially those located at prime core areas or the redevelopment of old existing traditional homes into modern mixed uses. Also conversion of bare land, commercial and public properties noticed in the study area may be attributed to the demand-supply interplay in those areas.

Table 4 Predominance of Change in Land Use Types in Abuja

Land Use Type	Frequency	Percentage (%)
Agricultural	31	41.89
Residential	22	29.73
Bare land	11	14.86
Commercial	7	9.46
Public Property	3	4.05

Analysis in Table 5 revealed the direction of predominance of land use changes by types in FCT Abuja. The result showed that, the direction of conversion from agrarian land use was majorly to public land use (45.95%) and residential area (27.02%). Residential land were also noted to have been converted to retail (52.71%) and office (29.73%). Public land were being encroach by residential use (35.14%), office building (32.43%) and retail (22.97%). The existing bare land use are now being dominated by residential use (31.08%) and public/Institutional properties (24.32%) uses as indicated by the respondents. From the analysis, four major dominant succeeding land uses were identified. These are residential, office, retail and public/institutional land uses. This outcome may be attributable to; continued

acquisition of agricultural land by government especially for immediate physical developments, secondly to the increasing squatter settlement by residents on government reserved lands and lastly to the increase in demand and improvement of accommodations and to meet the need for retail and office properties. Hence, land use conversion will continue to reoccur as long as demand for land by households, firms or/and governments changes..

Table 5 Direction of Predominant land Use Conversions in the FCT, Abuja

Changing land Use	Direction	Frequency	Percentage
Agricultural	Public/Institutional	34	45.95
	Residential	20	27.02
	Retail	8	10.81
	Office	6	8.11
	Industrial/Warehouse	4	5.41
	Recreational/Resort	1	1.35
	Total	74	100
Residential	Retail	39	52.71
	Office	22	29.73
	Public/Institutional	13	17.57
	Industrial/Warehouse	-	-
	Recreational/Resort	-	-
	Agricultural	-	-
	Total	74	100
Public Land	Residential	26	35.14
	Office	24	32.43
	Retail	17	22.97
	Recreational/Resort	5	6.76
	Industrial/Warehouse	2	2.70
	Agricultural	-	-
	Total	74	100
Bare Land	Residential	23	31.08
	Public/Institutional	18	24.32
	Office	13	17.57
	Retail	12	16.23
	Recreational/Resort	8	10.81
	Industrial/Warehouse	-	-
	Agricultural	-	-
	Total	74	100

In Table 6, four major modes of land use changes were examined namely increasing floor level, developing additional building on plot, modification/alteration and complete renovation/rehabilitation. 32.43% agreed with Complete Renovation/Rehabilitation and 25.68% identified the Modification/Alteration of existing buildings as the major mode of land use change. Increasing Floor Level accounted for 22.97% while the least mode of land use change were Developing Additional building on plot of land (18.92%). The complete renovation/ rehabilitation and modification/alteration of the existing building modes were identified as the predominant land use change due to the directions of land use change i.e. majorly from agriculture/residential to other uses (see Table 4). For example, when Abuja was declared as Federal Capital Territory (FCT), the area witnessed massive acquisition of agricultural land by federal government to develop institutional buildings and provide public goods. Also, residential property (existing buildings) were redeveloped (either renovated or modified) to suit the current demand in the property market. However, the choice of the

modes employed may have been influenced by changing government policies, demand-supply interplay and the maintenance cost effectiveness among others.

Table 6 Mode of Land Use Conversion in the FCT, Abuja.

Land Use Type	Percentage	Frequency
Renovation/Rehabilitation	24	32.43
Modification/Alteration	18	25.68
Increasing Floor Level	17	22.97
Developing Additional on plot	15	18.92

Table 7 showed the analysis of causes of land use change in Abuja. From the literature, twenty-one (21) causes were identified. The causes were broadly categories into four (4) as documented in the recent studies namely: biophysical, socio-demographical, economical and spatial political causes. Analysis of mean weighted score (MWS) for biophysical causes revealed that, locational attributes has the highest MWS of 4.25 ranked 1st, the 2nd ranked cause was land fragmentation with MWS of 3.17 followed by topography with mean of 3.02, climatic condition (1.25), erosion (1.22) and soil geology (1.07) and they occupied 3rd, 4th, 5th and 6th position respectively. For socio-cultural, causes such as preference, social relation and demographic structure were ranked 1st, 2nd and 3rd with MWS of 4.11, 3.72 and 3.70 respectively. Others such as land scape interaction and cultural value/norms were rank 4th and 5th with MWS of 2.58 and 2.19 respectively. Economic causes of investment potential, marketability, credit facility occupies 1st, 2nd and 3rd position with MWS value of 4.72, 4.48, and 4.29 respectively. Complementary and economic technology with MWS 3.95 and 3.15 occupied the 4th and the 5th position. Lastly, the computed analysis of spatial political causes of land use change showed that, planning, regulations/provisions and politics/political causes were ranked 1st, 2nd and 3rd with MWS 4.36, 4.09 and 3.81 respectively. Built Profession input and Tenure system at MWS 2.77 and 1.96 occupied the 4th and 5th position respectively.

Table 7 Attributable Causes of Land Use Change in FCT, Abuja

Causes	Category	MWS	Rank
Biophysical	Locational Attribute	4.25	1
	Land Fragmentation	3.17	2
	Topography	3.02	3
	Climatic condition	1.25	4
	Erosion	1.22	5
	Soil Geology	1.07	6
	Average	2.83	
Socio-Demographical	Preference	4.11	1
	Social relation	3.72	2
	Demographical Structure	3.30	3
	Land scape interaction	2.58	4
	Cultural Value/Norms	2.19	5
	Average	3.18	
Economical	Investment potential	4.72	1
	Marketability	4.48	2
	Credit Facility	4.29	3
	Complementary	3.95	4
	Economic Technology	3.51	5
	Average	4.19	
Spatial Political	Planning	4.36	1
	Regulation/Provision	4.09	2

	Politics/Political	3.81	3
	Built Profession Inputs	2.77	4
	Tenure System	1.96	5
	Average	3.40	

Locational attribute and land fragmentation as significant causes of biophysical land use change can be attributed to the peculiarities with the establishment of Abuja (FCT) and the rapid wave of changes in land use. The socio-demographical factors such as preference and social relation which became prominent in the study area arose due to classes of residents mainly high/medium most of when especially political classes) concentration in the area. Similarly, investment potential, marketability and availability of credit facility took prominence of economic causes due to active Abuja property market and rate of capital flight in the circulation. The significant contributions of planning, regulation/provision and politics/political to land use change as a spatial political causes can be attributed to changing government policies and governance framework with respect to land administrative system in Nigeria and Abuja particular. However, on average, economical causes were the most significant causes with average value of 4.19. This result supported the argument of [6] and [25] which stressed the superiority of economic causes among other land use change causative factors. Next are spatial political causes with an average value of 3.40. Socio-demographical causes and biophysical causes were the least significant causes with an average value of 3.18 and 2.83 in that order. The percentages of the average value were further explained and presented in Fig. 1.

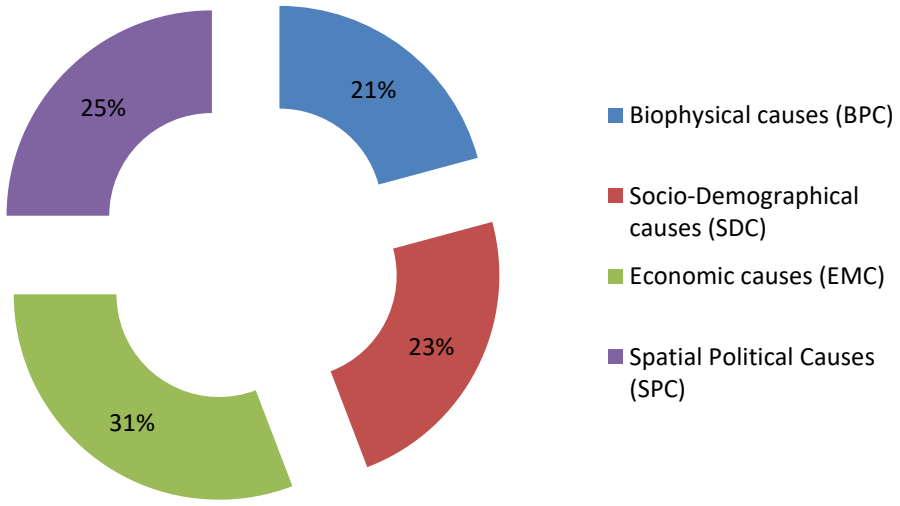

Figure 1 Causes of Land Use Change in Abuja

Note: Biophysical Causes (BPC), Socio-Demographical Causes (SDC), Economic Causes (EMC) and Spatial Political Causes (SPC)

Table 8 examined the consequences of changing land use change on neighbourhood quality. The study deployed descriptive statistics and mean weighted score (MWS) to analyse sixteen consequences in the study area and the result showed that, arbitrary land/rental value, landscape distortion and pressure on urban infrastructure were ranked 1st , 2nd and 3rd with MWS of 4.81, 4,53 and 4.18 respectively. The 4th, 5th and 6th ranked implications were traffic congestion, imbalance land use and threat to pollution. Other consequences ranked in descending order of their MWS and ranking were: imbalance property market (3.51; 7th),

tenure insecurity (3.23; 8th), overpopulation (3.01; 9th), unemployment (2.72; 10th), high crime rate (2.69; 11th), urban sprawl (2.58; 12th), decertification (2.51, 13th), climate (2.33; 14th), loss of business potential (2.11; 15th) and degradation (2.04; 16th). Arbitrary land/rental value of land especially those located at prime location are commanding high values for example, investigation revealed that rent for a block of 2 Bedroom flat ranged from ₦1.2m ₦2.5m while a plot of land (50ft x 100ft) is as high as ₦25m the core cities of Abuja. This arbitrary land/rental value has largely contributed to high cost of leaving in the area, emanates to the creation of neighbour with socio-economic classes, increase land use competition. Distortion of land use in FCT Abuja with the noticeable at urban fringe suggested the scatter illegal settle at the Abuja outskirt. The continuous growth of uncoordinated conversion of agrarian land use by low class Abuja residents and small business tends to results into other environmental problems such as decertification, urban sprawl and land degradation. Other noted consequences such as pressure on urban infrastructure, pollution and traffic congestion are linked to overpopulation while imbalance land use and property market can be attributed to uneven pattern of land use change among other.

Table 8 Implications of Land Use Change on Neighbourhood Quality

Implication	**Mean**	**S.D**	**S.E**	**95% Conf. Interval for Mean**		**Min.**	**Max**	**Rank**
				Lower Bound	Upper Bound			
Arbitrary land/Rental Value	4.81	0.713	0.042	4.75	4.87	4	5	1
Landscape Distortion	4.53	0.943	0.081	4.41	4.65	3	5	2
Pressure on Unban Infrastructure	4.18	1.263	0.057	4.09	4.27	4	5	3
Traffic Congestion	3.93	1.452	0.062	3.84	4.01	3	5	4
Imbalance land use	3.86	0.872	0.073	3.78	3.94	2	5	5
Pollution (Land, Air and Water)	3.54	0.491	0.059	3.44	3.62	3	5	6
Imbalance Property market	3.51	1.638	0.067	3.43	4.60	3	5	7
Tenure Insecurity	3.23	1.772	0.069	3.15	3.31	2	5	8
Overpopulation	3.01	0.963	0.056	2.93	3.09	1	4	9
Unemployment	2.72	0.534	0.060	2.67	3.03	1	4	10
High crime rate	2.69	0.556	0.061	2.61	2.86	2	5	11
Urban Sprawl	2.58	1.434	0.053	2.52	2.62	1	4	12
Decertification	2.51	1.791	0.073	2.46	2.58	1	3	13
Climate change	2.33	1.035	0.046	2.23	2.43	1	4	14
Loss of Business Potential	2.11	1.435	0.062	2.05	2.17	1	3	15
Degradation	2.04	0.147	0.054	1.95	2.13	1	3	16

Note: Standard Deviation (S.D), Standard error (S.E), Minimum (Min.), Maximum (Max.)

5. CONCLUSIONS

Land use change is the product of urban physical growth and socioeconomic development. The changing pattern and direction of land use change in FCT, Abuja is majorly form agricultural and residential land uses to public, retail, office and residential land uses. The causes such as economic and spatial political factors were the dominant factors while the significant consequences were arbitrary rental/land value, landscape distortions, pressure on urban infrastructure among others as indicated by the respondents. The study recommended that policymakers and private stakeholders should encourage and adhere to land use control measures to strike a balance between economic development and land administrative system to foster a sustainable urban cities.

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