ASSESSMENT OF STRATEGIC PERI-URBAN STRUCTURE OF OJOO AND SASA AREAS OF IBADAN, NIGERIA

[1]O. Ekanade, [1*]S. Yakubu and [2]D. A. Yakubu

[1]Department of Geography, Osun State University, Osogbo
[2]Department of Urban and Regional Planning, Osun State University, Osogbo
Corresponding author's e-mail: Samuel.yakubu@uniosun.edu.ng

Abstract

The study is an assessment of strategic peri-urban structure of Ojoo and Sasa areas of Ibadan. The study area was stratified into four zones namely; A, B, C and D according to distance from the municipal boundary with each zone 1,000m apart, purposely chosen to allow comparison of results. The first zone was 0-1000m from the municipal boundary. A set of 200 questionnaires was administered (50 in each of the four zones) while 180 duly filled were returned for computation. Descriptive statistic was used to analyse the administered questionnaire. The study showed that urban to peri-urban migration accounted for 59% of population growth in the area induced primarily by availability of cheap land and rental apartments. The Ojoo/Sasa peri-urban interface is an area of micro industries and center of informal enterprises mainly dominated by the self-employed. Infrastructure like road, waste disposal and sanitary facilities are inadequate while pipe borne water supply is generally unavailable. Development is noticed to be sprawling but diminishing the agricultural land of the peri-urban area. The study concludes that the pattern and rate of growth is unsustainable in view of infrastructure available to the increasing population. Therefore, planning intervention is considered necessary.

Keywords: Peri-Urban, Structure, Infrastructure, Ojoo/Sasa, Ibadan

Introduction

The process of making rural areas resemble urban ones and the diminishing geographic and civilizational distance between them entails an evolution in the perception of urban and rural areas as two opposite categories. Peri-urbanisation is a process of urban transformation that occurs in rural areas which are located in a catchment zone of urban forces and predisposed towards a multifunctional development (Idczak and Mrozik, 2016).

Peri-urbanisation affects areas under increasing pressure from urban centres that are commonly defined as a transitional zone between urbanised areas (densely built up areas) and rural areas dominated by agricultural activities. A sharp distinction between urban and rural settlements generally assumes that the livelihoods of the inhabitants can equally be reduced to two main categories: agriculture based in rural areas and manufacture and services based in the urban centers. However, this assumption bypasses the stage or phase between the two entities. These areas are characterized by a mixed land use and have indeterminate inner and outer formal boundaries. They usually cover territories split between different administrative areas (Webster and Muller, 2009). In a functional sense, they constitute a transitional (mixed) zone of urban and rural areas that on the one hand, strongly influenced by urban processes and on the other hand, characterized by the typical morphology of rural areas (Caruso, 2001). Gallent et al. (2006) noted that these areas are places where urban and rural changes are closely dependent and their main characteristics are land uses that are often "peculiar to the fringe".

Although peri-urban areas may be structurally and functionally different from urban and rural areas,

they are considered an inherent component of urbanisation (Butt, 2013). Their occurrence in the form of "areas of transition" is determined by the strong influence of large cities and more specifically by progressive urbanisation drives. The power of such forces is not limited to a city's administrative boundaries but covering a functional urban region.

In general, large cities are places from which new patterns of development spread to the surrounding areas as confirmed on the European scale by Kasanko et al. (2006) that the demographic and socio-economic growth over the last decades has put massive pressure on metropolitan areas. As a result, the traditional compact cities have expanded into adjacent rural areas. A remarkable feature of this process has been a variety of urban expansion patterns in both physical and functional terms.

Most developing countries in the sub-Sahara region experienced high rate of urbanization and rapid urban growth that was not catered for in the development plans of the government. The urbanization problems are particularly complex and daunting in Nigeria, with inadequate and ineffective development control and very rapid growth in urban population (UNICEF, 1998), running at an estimated average of 5.5% per annum in recent times. Ibadan has long been regarded as the largest city in Sub-Saharan Africa with a clear symbol of rapid but unbridled urbanization in Nigeria. The urban landscape in Ibadan had spread to 101.9km^2 by 1973 (Ayeni, 1982) and had significantly expanded to 209.4km^2 by 2000 (Oyinloye, 2003). With this phenomenal growth and uncontrolled urbanization in Ibadan, it is obvious that Ibadan cannot escape a few related problems that come in the form of unbridled peripheral expansion, poor infrastructures and other social vices of the time.

Moving away from the urban centers depicted, the peri-urban areas in most cases are bedevilled with inadequacy of life-support systems such as pipe-borne water, medical facilities and infrastructures such as roads, electricity and communication facilities. In all major cities in Nigeria, peri-urban areas have rapidly developed on the fringe of the urban centers and most of these peripheral development and growth has been as a result of individual initiative to subdivide land and construct structures ahead of any formal planning regulations (Lukman and Doyen, 2000).

The peri-urban area has become a 'no man's zone' as it is termed the 'rural area' by the urban municipalities and the rural authorities consider it 'urban' because of the change in the physical set-up. The town planning regulation which should be responsible for development control in urban areas have not been effectively and efficiently utilized for physical planning and management in these areas.

This study seeks to identify why the people settle in these areas, what influences their decision to stay in the area and to assess the spatial characteristics of the peri-urban areas. As the peri-urban interface will eventually become incorporated into the urban area, it is therefore imperative to understand the peri-urban development because their existence finally becomes a reality for the city to manage, coordinate and share resources with the newly incorporated areas.

Methodology

The study area

Ojoo and Sasa are among the numerous peri-urban districts of Ibadan. Initially, they were villages which over the years have grown and expanded to overall expansion of Ibadan-city proper. Ojoo and Sasa communities, which are the focus of the study, are located at the northern edge of Ibadan municipality, a linear form of settlement development on either side of the two highways that lead to the northern part of the country. Specifically, the study area lies within Latitudes 07^0 29' 30"N and 07^0 28' and Longitude 003^{0}54'E and 003^{0}55'E (See Fig. 1).

Historically, Ojoo and Sasa have been in existence since 1829 when Ibadan was founded but as a rural village. Like many other settlements around such as Ijaye, Iroko and Ikereku, Ojoo and Sasa were originally occupied by the Egbas who came there purposely to trade. But during the war between the Ibadan and the Egbas, the Egbas were defeated and as such the Egba residents of Ojoo and Sasa were sent away and the people of Ibadan occupied the place. However, the resettlement of people displaced from various villages by the establishment of International Institute of Tropical Agriculture (IITA), to the present location of Sasa can be said to be the first phase in the gradual urbanization and physical expansion of Sasa in particular.

With the gradual increase in the population of Ibadan City, physical development mainly in terms of housing extended in all directions into adjourning rural local government areas and to the study area and beyond which is some 15km away to the assumed center of the city of Ibadan (Mapo Hill). Gradually, the study area (Ojoo and Sasa) started growing and their spatial scope extended to gulp

nearby villages of Ikiye, Ewena, Jagun and Kajorepo among others. Ojoo and Sasa fall within the ambit of Akinyele Local Government Area, classified as a rural local government. However, these two communities have a level of development that surpasses what can be termed as rural and possessing more of urban characteristics. The proximity of Ojoo and Sasa- boundary settlements between Akinyele Local Government and Ibadan Northeast Local Government (an urban local government) has resulted into an urban development that actually frog-jumped to the current status.

The earlier head count of the area was lumped together with those of other settlements within the local government. With time, commercial activities in the area began to spread due to the strategic location of the area. With the increase of the commercial activities, people from far and near where attracted to the area to trade thereby increasing the population of the area. It is therefore not surprising seeing different tribes like the hausa, ibo, tiv, Idoma, among others in the area. According to National Population Commission, the whole Akinyele local government was 140,118 in 1991. It rose to 224,745 in 2006 and projected to 327,979 in 2018. The figure for Ojoo and Sasa were respectively 13,915 and 7,992 in 1991; 22,319 and 12,819 in 2006 and 32,571 and 18,707 in 2018. Together the population of Ojoo and Sasa added up to 51,278 inhabitants in 2018 based on the projected statistical

estimate of the population using the 3.2% annual growth rate adopted by the national population commission.

Data collection and analysis

The study area was stratified into four zones namely; A, B, C and D according to distance from the municipal boundary with each zone 1,000m apart. This distance is an arbitrary one but purposely chosen to allow more classes for comparison of the results. The first, zone A was 0-1000m, zone B: 2,000m, zone C: 3,000m and zone D: 4,000m away respectively from the municipal boundary. A set of two hundred (200) questionnaire was administered 50 in each of the four zones. The respondents were adult male or female as the case may be in residential housing units. Field observation and visual interpretation were also used to capture data on the field to assess the standard and the nature of the infrastructure available. The criterion used was based on availability and non-availability. The infrastructure includes availability of services like: electricity, water, drainage and waste management facilities, accessibility network among others. The breakdown of the 180 satisfactorily answered questionnaires returned for computation in each of the four zones were 48, 42, 45, and 45 for zones A, B, C and D respectively. Descriptive statistic was used to analyse the administered questionnaire.
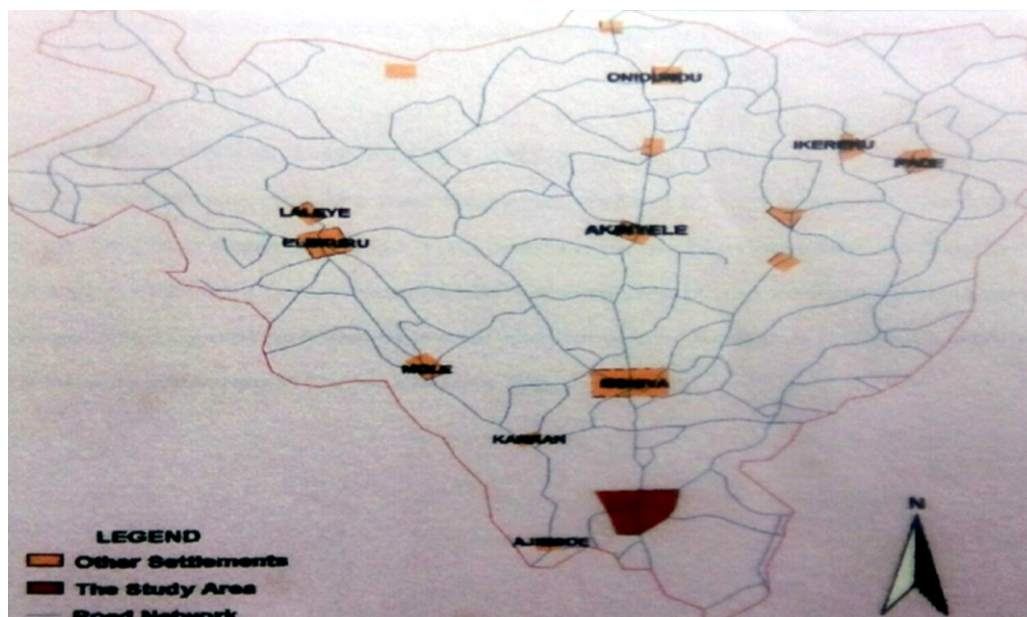

Fig. 1: Map of Ojoo/Sasa and the NeighboursScale 1 : 250,000

Results and Discussion

This section presents and discusses the results of the questionnaire administered to respondents in Ojoo/Sasa per-urban area. The spatial growth of unplanned settlements may be attributed to socio, economics and cultural behaviour of the population concerned. It may also be a reaction of external forces like regional and national socio-economic activities (Lin, 2000).

Gender of Respondents: Majority of the respondents (62.2%) are male while 37.8% are female as shown in Table 1. The sample population is dominated by male gender when compared with that of the female.

Table 1: Gender of Respondents

Sn	Item	Frequency	Percentage
i.	Male	112	62.2
ii.	Female	68	37.8
Total		180	100

Monthly income: Table 2 shows the distribution of monthly income of respondents in the study area. The income group of 20,000-30,000 toped the group with 25% and closely followed by income group of N10,000-20,000 (20%) while respondents with <N10,000 (10%) income group came last. There is variation of income levels between tenants and landlords. While the larger percentage of the tenants are in the less than N30,000 income category in a month the land lord lies on the income group of > N30,000.

Table 2: Income

Sn	Income category	Frequency	Percentage (%)
i.	<10,000	18	10.0
ii.	10,000-20,000	36	20.0
iii.	20,000-30,000	45	25.0
iv.	30,000-40,000	27	15.0
v.	40,000-50,000	25	13.9
vi.	>50,000	29	16.1
Total		180	100

Previous studies of peri-urban areas by Timothy (1995) suggests that a large proportion of the residents found in the area are low income migrants. But Browder et al (1995) however disputed this theory that peri-urban interface is a zone of low-income residents. In Ojoo/Sasathe peri-urban interface, though there are household from low income category (less than N10,000 per month),

there are as well people with high income earners (more than N50,000). The finding of this study is in agreement with Oladotun (2005) and that of Browder's findings, of the peri-urban households in Jakarta, Indonesia and Santiago in Latin America. The increase in the number of luxurious properties in the peri-urban areas is another indication of some high-income settlers in the area. The assumption that peri-urban settlers are poor and cannot afford shelter in well-planned settlements cannot be applied to all cases of peri-urban growth. It therefore suggests that peri-urban residence did not settle in the area because of low income but there could be other reasons why people preferred the peri-urban area as majority of residents have stable jobs and resources.

Employment status: Table 3 showed an employment status of respondents. Self-employment is the main sources of living for most of the households in the peri-urban interface as 65% respondents derive their source of living on their own inform of engaging in artisanship, business and farming activities. However, there is equally a quite high rate of payed employment (35%). The level of employment varied with distance from the city boundary as showed in Table 3. More so, the rate of self-employment for the female respondents is higher than the male. This result conforms with the findings of Allen and Da-Silver (1999) who noted that peri-urban areas are areas of micro industries and center of informal enterprises and Oladotun (2005) who previously indicated that 33.53% of the peri-urban residence engaged in an informal sector while the majority derived their employment from internal enterprises in their immediate local environment and from Ibadan metropolis.

Browder et al 1995 says that not all peri-urban areas are functionally integrated with rural areas. In most cases, this integration is observed in the form of rural oriented activities (especially farming) that are occurring in the peri-urban environment. The residents of Ojoo/Sasa demonstrated that they integrated into the service, business and manufacturing sectors of the urban economy as opposed to the rural economy in the case of Kumasi, Ghana by Corubolo (1999).

Migration: The growth of peri-urban areas in most Sub-Saharan African cities consists of two migratory flows. Direct rural-urban (peri-urban) and urban to peri-urban migration. As a coping strategy towards poverty, rural people migrate to urban areas for employment and other income enhancing opportunities. Some of the rural migrants en route to

the urban areas are absorbed in the peri-urban and establish themselves in the peri-urban. As shown in Table 4, most of the respondents came from urban areas (58.9%), followed by those who came from the rural area (22.2%) while 15% settlers were bore in the area. There are seven respondents (3.9%) who migrated from another peri-urban area. Zone A which lies within 0-1,000m from the city boundary could be an entry point for most immigrants from the city because the percentage of urban responses is highest in this zone than any other zone. This finding is in agreement with Oladotun (2005), but in disagreement with Timothy's (1995) finding that rural-urban migration is the major contributor to peri-urban growth.

Residency duration: Usually, settlers arrive to a destination at different points in time. Table 5 shows the residency duration of respondents who settled in Ojoo/Sasa area which largely responsible for the growth of the areas. 28.3% respondents have been in the area from 16 to 20 years. This is closely followed by respondents who have settled there between 11

and 15 years with 26.1% while the least group of settlers (10.6%) are those who newly arrive between 0-5 years.

Reason for relocation: Table 6 shows the number respondents who indicated their reason for relocating to the present peri-urban area. 73 respondents (40.5%) were due to cheap housing, followed by 56 respondents (31.1%) who migrated there because of cheap land at the peri-urban area. The general picture obtained from the above is that intra-migration (migration from peri-urban to another peri-urban) and urban to peri-urban migration is related to land factors like affordability and cheap housing. From the interview held with landlords, they admitted that cheap land was the major reason for their migration to the peri-urban area while on the part of the tenants, the attractive force was the relatively cheaper housing obtainable in the area. There are tenants who moved from one zone to another zone in search for comfort, better and cheaper accommodation.

Table 3: Employment Status

Sn	Employment Status	0–1000m		1000–2000m		2000-3000m		3000-4000m		Ground Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i.	Self Employed	27	56.3	26	61.9	34	75.6	30	66.7	117	65
ii.	Employed	21	43.7	16	38.1	11	24.4	15	33.3	63	35
Total		48	100	42	100	45	100	45	100	180	100

Table 4: Previous Location of Respondents

Sn	Previous Location	0–1000m		1000–2000m		2000-3000m		3000-4000m		Ground Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i.	Urban Area	35	72.9	24	57.1	27	60.0	20	44.4	106	58.9
ii.	Rural Area	2	4.2	11	26.2	13	28.9	14	31.1	**40**	**22.2**
iii.	Peri-urban	-	-	2	4.8	2	4.4	3	6.7	7	3.9
iv.	Born in the Area	11	22.9	5	11.9	3	6.7	8	17.8	27	15.0
Total		48	100	42	100	45	100	45	100	180	100

Table 5: Residency Duration

Sn	Residency Duration	0–1000m		1000–2000m		2000-3000m		3000-4000m		Ground Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i.	0-5 years	7	14.6	4	9.5	5	11.1	3	6.7	19	10.6
ii.	6-10 years	9	18.7	10	23.8	1	2.4	5	11.1	25	13.9
iii.	11-15 years	13	27.1	12	28.6	10	22.2	12	26.7	47	26.1
iv.	16-20 year	11	22.9	12	28.6	13	28.8	15	33.3	51	28.3
v.	>20 years	3	16.7	4	9.5	16	35.5	10	22.2	38	21.1
Total		48	100	42	100	45	100	45	100	180	100

Table 6: Reason for Relocation

Sn	Reason	Frequency	Percentage
i.	Better opportunity	20	11.1
ii.	Cheap housing	73	40.5
iii.	Avoiding urban congestion	18	10.1
iv.	Cheap land	56	31.1
v.	Employment	13	7.2
	Total	180	100

Table 7: Ownership of House

Sn	Residency Duration	0–1000m		1000–2000m		2000-3000m		3000-4000m		Ground Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i.	Landlord	17	35.4	16	38.1	15	33.3	20	44.4	68	37.8
ii.	Tenant	31	64.6	26	61.9	30	66.7	25	55.6	112	62.2
Total		48	100	42	100	45	100	48	100	180	100

Ownership of house: Majority of the respondents 62.2% are tenants while only 37.8% are landlords. The need for housing in the area is very high especially tenant housing. The demand for rental accommodation and the willingness to meet this need accounted for the current hike in the price of land acquisition in the area and consequently accommodation. The cost of land, though, is still cheaper at the peri-urban when comparing with what is obtainable at the Ibadan metropolis.

Family size: Most families in Ojoo and Sasa are extended families. In this study, a family of 3-4 persons is considered a 'small family', a family of 5-6 members is considered to be 'medium-size family' while a family of 7 members and above is considers as a 'large family'. From Table 8, the increasing order of the family size is; small family size (19.4%), medium family size (30.6%) and large family size (50%). This result contradicts the 38% (small), 47% (medium) and 15% (large) family sizes respectively obtained by Oladotun (2005). Household size for the study area ranged between 2-12 persons and the average family size is 6. Mabogunje (1968) argues that urbanization indirectly encourages the downsizing of the typically large Nigerian family. Urban families live in one house with a number of rooms or in a room (in the case of low income families living in an informal settlements) whereas in the rural areas a single family lives in a number of houses within homestead.

Table 8: Family Size

Sn	Size	Frequency	Percentage
i.	Small	90	19.4
ii.	Medium	55	30.6
iii.	Large	35	50.0
	Total	180	100

Electricity supply: Ojoo and Sasa are connected to the national grid and the level of electricity supply is very high in the area. Findings from this study show that about 88% respondents are connected to electricity on a household level while only 12% are not due to one reason or the other (see Table 9). The study area is densely populated which means high demand for the supply of electricity. Promoting peri-urban electrification could be a win-win solution for utilities and poor consumers by preventing illegal connections through a well-planned electrification scheme. The absence of service roads or their poor state within settlements causes problems of easy reach to some of their clientele.

Table 9: Regularity of Electricity Supply

Sn	Electricity Supply	0–1000m		1000–2000m		2000-3000m		3000-4000m		**Ground Total**	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	**Freq.**	**%**
i.	Yes	46	95.8	38	90.5	39	8.7	35	77.8	**158**	**87.8**
ii.	No	2	4.2	4	9.5	6	13.3	10	22.2	**22**	**12.2**
Total		48	100	42	100	45	100	45	100	**180**	**100**

Transport: Ojoo and Sasa are accessible through Lagos-Ibadan expressway, Ibadan-Oyo highway and Ibadan-Iwate-Fiditi route. However, internal accessibi1ity within the peri-urban area is severely limited by the absence of planned and well-maintained local and service roads. Accessibility problem is well noticed especially in the raining season when some of the routes are not passable. Most of these roads are just single lane that started as footpaths leading to homestead and often they have dead ends. As indicated in Table 10, most of the households in the study area depend on public transport as attested by 57.2% respondents while 42.8% respondents have private means of mobility. It was also observed that the use of private transport increases with distance from the city boundary from approximately 25% at the 0-1,000m zone gradually to 50% at the 3,000-4,000m zone. This goes on to show that as settlement gets further away from the main city, the rate of public transport patronage decreases due to bad road and low patronage.

Water supply: Water is one of the major essential things in life. It is an essential resource needed for day-to-day activity of man in both rural and urban areas. Public water supply was never planned for the study area; hence the major source of water is from well. As shown in Table 11, only few houses derive their water through borehole which accounts for 20.6% while majority (72.4%) depend on well. Though all the houses do not have private wells but may be jointly owned or publicly sunk for their use. Acute water scarcity occurs in the area especially during the dry season when most of the wells dry up and only the boreholes are left functioning.

Whenever this happens, residents have to move far distance to either fetch or buy water from water selling neighbour.

Drainage: Major parts of the study area lack drainage facility with the exception of the major roads that pass through the area which have good drainage system. Though water flows along natural depressions, however, water flow becomes a problem especially during the rainy season when most of the roads are gullied by strong water flows. Sewage from domestic wastewater originating from household waste is freely discharged on the ground surface without concern which may result in health hazard for people living in the area.

Solid Waste disposal: Solid waste disposal is a huge problem in peri-urban because there is a high prevalence of dumps. In Table, 67.8% respondents use waste container, followed by waste pit (14.4%), open dumps (12.2%) and others (5.6%) to dispose their solid wastes. Some of these methods of disposal are used in combination with other method like burning. In most cases, refuse is dumped on any vacant land found within the area. This form of unplanned dumping constitute an eyesore in any place where such is found. The situation is worsened in raining when the refuse is sometimes washed from the heaps to the streets. This finding is in tandem with Yakubu and Giwa (2006) who noted that the prominent habit in most peri-urban areas in Nigeria is the dumping of refuse on roadsides, available depression, open pits, drainage channels and rivers/stream channels. This indiscriminate disposal of solid waste is linked to urbanization, population

Table 10: Transport Mode

Sn	Transport Mode	0–1000m		1000–2000m		2000-3000m		3000-4000m		Ground Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i.	Private	13	27.1	18	43.0	20	44.4	26	57.8	77	42.8
ii.	Public	35	72.9	24	57.0	25	55.6	19	42.2	103	57.2
Total		48	100	42	100	45	100	45	100	180	100

Table 11: Water Supply

Sn	Water Supply	0–1000m		1000–2000m		2000-3000m		3000-4000m		Ground Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i.	Well	30	62.5	35	83.3	38	84.4	40	89.0	143	72.4
ii.	Borehole	18	37.5	7	16.7	7	15.6	5	11.0	37	20.6
Total		48	100	42	100	45	100	45	100	180	100

growth, poor governance, poverty and low level of environmental awareness (Ogu, 2000; Yakubu and Abdulkarim, 2015). On the other hand, the solid waste management in Nigeria is characterized by inefficient collection methods and insufficient coverage of the collection system (Yakubu, et al., 2015).

Sanitation: From Table 13, the use of water closet toilet is common and popular among the respondents as 76.7% use it. This is closely followed by pit toilets (20.6%) and lastly, bush method (2.7%). Single families exclusively own some of these pit toilets and landlord household and their tenants share some. Where there are no toilets; the inhabitants make use of nearby bush, streamside or the available undeveloped land to excrete.

In Ojoo and Sasa areas, the external forces have shaped and controlled the development of the settlements. According to Gardner (2000), sanitation that is sustainable spends the minimal amount of energy and resources with the least loss of useable matter to contain and convert it to its usable form. In the study area, individual efforts are made to improve sanitation at the household level but less at the communal level which result in the loss of land that could be conserved for future development.

The growth of settlements in Ojoo and Sasa does not support principles of sustainable sanitation as used by Gardener (2000) and can therefore be defined as unsustainable growth as development in the peri-urban area occur in a haphazard manner. Studies by Amoateng et al. (2013) indicate that peri-urban areas are experiencing unplanned physical growth characterised by an unregulated pattern of physical development, resulting in complex organic urban growth. Such areas often and predominantly expand with horizontal developments, turning potential areas of activity and human attraction into a "mini-city". This growth results in land use changes which, according to Sarfo-Mensah and Adam (1998), can classified into two major forms: land used for agriculture at the expense of fallow and forest land and land used for building development, especially housing, at the expense of agricultural land.

In summary, the attributes of peri-urban areas are not constant but can change according to time and place. They constitute some areas influenced intensively by urban drives and situated very close to large city as in the case of Ojoo and Sasa but still within the urban functional area of Ibadan where specific urban features such as industries, new investments, employment opportunities and population growth beyond those provided by agriculture alone coexist with that of the rural features of agricultural and non-agricultural functions. This according to Idczak and Mrozik (2018) are zones of transition or a new kind of multi-functional territories that evolve and can be shaped by spatial governance processes.

Table 12: Solid Waste Disposal

Sn	Methods of Disposal	0–1000m		1000–2000m		2000-3000m		3000-4000m		Ground Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i.	Open dump	2	4.2	3	7.1	7	15.6	10	22.0	22	12.2
ii.	Waste container	38	79.1	32	76.2	23	51.1	29	65.0	122	67.8
iii.	Waste pit	8	16.7	6	14.3	10	22.2	2	4.0	26	14.4
iv.	Others	-	-	1	2.4	5	11.1	4	9.0	10	5.6
Total		48	100	42	100	45	100	45	100	180	100

Table 13: Sanitation

Sn	Sanitation	0–1000m		1000–2000m		2000-3000m		3000-4000m		Ground Total	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
i.	Water closet	45	93.8	40	95.2	30	66.7	23	51.1	138	76.7
ii.	Pit toilet	3	6.2	2	4.8	15	33.3	17	48.8	37	20.**6**
iii.	Bush method	-	-	-		-	-	5	11.1	5	2.7
Total		48	100	42	100	45	100	45	100	180	100

Conclusion and Recommendation

The peri-urban areas of Ojoo and Sasa have grown rapidly over the years which resulted in change of land use. Vacant land has been transformed into built-up areas and the trend shows no sign of abating unless interventions of some sort are introduced. The study area is characterized by large number of tenant households compared to non-tenant households. There are few households that are indigenous to the area and large proportions of the households in area are migrants' households. These households ranged from low income households to large income households although large proportion fall into the low and middle income groups. A large proportion of the peri-urban households have access to some urban services especially electricity supply, however, there is a general lack of pipe borne water, sanitation systems and effective solid waste disposal mechanism. Migration to peri-urban and lack of adequate administrative control are the major causes of unplanned, spontaneous growth in the peri-urban area of Ojoo and Sasa. To control growth and manage settlements on the peripheries of urban areas, adequate planning with infrastructure is considered necessary.

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