Effect of Access to Land on Housing Delivery in the North Central States of Nigeria

[1]S. S. Kuma and [2]J. I. Ighalo

[1]Department of Estate Management and Valuation,
Federal University of Technology, Minna

[2]Department of Estate Management,
Bells University, Ota

Abstract

The paper assessed the effect of adequate access to land and development control on urban housing delivery in the North central Nigeria. The study used both primary and secondary data obtained through questionnaire; and certified secondary sources. The analysis made was by correlation coefficient, descriptive methods, Pearson's chi-square test and ANOVA. Findings reveal that the government has not been able to deliver adequate land for housing development as only 47.43% of the total demand was supplied. Statistical evidence also suggests that the growing urban population rely more on the informal land market for access to land and only 35.8% of developments on such lands passed through statutory approval. Most developments do not conform to planning regulations with poor access to facilities and services. The study concludes that, lack of adequate access to land has contributed significantly to the growing poor urban housing situation in the study area and recommends government intervention through the establishment of more layouts and trimming down of bureaucracy in land administrative mechanism for ease of distribution, accessibility and development.

Keywords: Access to land, informal sources, development control, housing delivery.

Introduction

Land has undoubtedly remained at the heart of the housing delivery process and it determines to a large extent, the accessibility to other variable requirements in housing development. Olatubara (2007) opined that, access to land is one of the most fundamental indicators of housing. However, as imperative as land is to the housing development process, the immense problem of accessibility has continued to persist, a trend widely blamed on public institutions and policies.

In the developing countries particularly those of the sub-Saharan Africa, access to land has been principally through the formal and informal institutions. While the formal institutions are by statute expected to provide cheaper, easy and secured access to land, the bureaucratic processes and cumbersomeness in the procedures has rather created a myriad of problems. The studies of Acquaya and Asiama (1986), Aribigbola (2007) and Otubu (2008) revealed that the rather ineffectual performance of the formal institutions has led to several constraints on access to land. Some of these constraints include; speculation and inordinate rise in land prices as well as making the land allocation mechanism discriminative on socio-economic status of some prospective land owners (Bello, 2007). Oyedokun, Adewusi, Ojo, Onakoya and Akinbogun (2012) and Kuma (2013) have also shown in their works that bureaucracy and corruption in public land administration has made access to land through the formal institutions very challenging and has continued to encourage land access through informal sources. However, in the wake of rapid urban growth and expansion, the activities in the urban land and housing market do not condone public

bureaucracy regarding formal land access, registration and development control hence resulting to extra-legal residential developments (Rakodi, 2007). This situation often leads to the vulnerability of certain urban areas to slum conditions thus prompting a line of thought about the relationship between effective access to land and urban housing conditions. A similar thought process was corroborated by Tibaijuka (2004) that, land is literally at the base of slum formation and that to address the slum issue will mean taking the land issue seriously. Hence, it is within this frame of thought that this study investigated the effect of access to land on housing delivery within the urban areas in North Central States of Nigeria.

In Nigeria, the population growth has continued to rise tremendously recording an increase of 23.95 million people in 6 years (2006 2012); 12.87% of this total is from the North Central Region, with a migration rate of rural urban put at 52.2% which has resulted in the increase in the number of urban households. Statistical evidence put land ownership rate in the region at 25.1% (World Bank/National Bureau of Statistics, 2009). This is an indication of prevalence of inadequate access to land and could translate to inadequate or poor accessibility to housing. Surveys by United Nation Development Program (UNDP) in 1996 and Centre for Human Settlement and Urban Development (CHSUD) in 2006 in the region revealed that about 70 - 75% of urban housing is situated in slum conditions. It further revealed that, squatter settlements characterised by unplanned development with inadequate infrastructure like roads, water supply and electricity. Thus, the question to ask here is, can the housing situation in the area be attributed to

the pattern of access to land?

The study therefore assessed the provision and access to land and its effect on housing delivery. The objectives were to; (i) assess the adequacy of the provision of land by the government amidst the growing urban household population and demand for housing development, (ii) identify the predominant sources of access to land and level of residential development control and (iii) assess households' access to facilities and services.

Literature Review

The delivery and access to land in most urban areas are mainly between the formal and informal institutions. The formal land administration in its inability and ineffectiveness, has failed to meet the demands of the majority of urban poor/low income earners paving way for increased reliance on the informal land markets (Durand-Lasserve, 2005; Rakodi, 2007 and Nkurunziza, 2007). Literature on informal land delivery by Leduka (2004), Oloyede Ajibola, and Oni (2007) and Olajide (2010) have indicated that the informal land markets have supplied significant amount of land cutting across socio-economic divisions in the urban areas. Although these informal land markets most times provide land at affordable prices, such lands sometimes do not have statutory titles and often devoid of households' facilities and services as they come in places likely unplanned areas of the city eluding development control by the local planning authorities.

Due to the setbacks emanating from the operations of the formal institutions, the informal land and housing markets have become popular and growing rapidly in developing countries. Moreso, drawing

inference from Mudalige (2007) that, poverty, insecure tenure and informal settlements are in a close relationship therefore, as long as the issue of poverty prevails, informal developments persist and this comes with its attendant development challenges. This scenario is evident in the study of Ahmed and Dinye (2011) which revealed that, informal and uncontrolled access to land has resulted in people developing on roads and water ways, a situation that lead to chaotic urban land use that impedes on orderly development.

Research Methodology

The North Central Nigeria is one of the 6 geo-political regions (or zones) in the country and comprised of six states; Benue, Kogi, Kwara, Nasarawa, Niger and Plateau and the Federal Capital Territory (FCT). For the purpose of this study, 4 out of the 6 states were selected as test beds, Plateau was isolated following its persistent indigene-settler land crisis while challenges of access to data leaves also Kwara out. Data for the study were collected through the use of questionnaire distributed to 1,600 residential landowners in a ratio of 400 per state capital. Considering that there is no available certified records of residential land owners in the area but to be able to obtain a sample size that could be statistically appropriate for the nature of data required, the following formula was adopted (Adams, Khan, Raeside, and White, 2007);

Where; n_0 = sample size sought for, = Standardised normal value (confidence level) = 95% (1.96), ρ = Estimated rate (47%) and d = Precision range (confidence interval) = 5%., Thus;

Therefore, = 380/case study. This gives a total sample size of 1,520, and rounded off to

1,600 representing a size of 400 landowners per case study. Their selection was through a purposive sampling technique and the survey attained 83.9% response rate with 1,342 questionnaires filled and returned. Data on annual applications received and land allocations made by the government were obtained from the respective States' Ministries of Lands and Housing. While data on the number of applications and permit granted for residential land development were obtained from the States' Urban Development Boards. Analysis made was by Pearson's Moment Correlation to establish the relationship among annual growth in the number of urban households *PoP*, Annual applications received for residential land *ApR*, and Annual approval granted *ApA*. Further, the Pearson's Chi-square was used to ascertain the relationship between Annual applications approved for land allocation *ApA* and Annual applications received for residential development permit *ApD*. These variables are independent and categorical hence the dataset on the *R x C (2x2)* contingency table. Further attempt is also made to establish if there is a similar pattern or variations in the sources of access to land and household's facilities and services in the area hence the use of single factor Analysis of variance (ANOVA).

Results and Discussion

The provision of land and permit for housing development by the government (Table 1) have shown a significant gap between the number of applications received for residential land and approval made. 47.43% of 60,469 applications received were granted between 1999 and 2011 indicating less than 50% of the total demand. While 35.8% of the total applications received for residential development permit between 1999 and 2011 were approved.

Table 1: Characteristic of Respondents

Location	Total No of Application Received	Total No of Application Approved
Land Allocation		
Makurdi	27,840	9,974 (35.8%)
Lokoja	12,323	5,636 (45.7%)
Laafia	9,864	6,630 (67.2%)
Minna	10,442	6,439 (61.7%)
Total	60,469	28,679 (47.43%)
Development Permit		
Makurdi	4,625	1951 (42.2%)
Lokoja	2,196	836 (38.1%)
Laafia	1,926	514 (26.7%)
Minna	3,849	1207 (31.4%)
Total	12,596	4,508 (35.8%)

Source: Field Survey, 2013

A correlation analysis of the Annual growth in the number of urban households *PoP*, Annual applications received for residential land *ApR*, and Annual approval granted *ApA* indicate that the pairs of *PoP* and *ApR* shows a negative correlation coefficient for Makurdi (-0.750), while Lokoja (0.106), and Minna (0.473) indicate a positive but weak correlation. Lafia has a coefficient of 0.515 which indicates a fair relationship between the pair of *PoP* and *ApR*.

Table 2: *Correlation Matrix*

Location		PoP	ApR	ApA
Makurdi	PoP	1.000		
	ApR	-0.750	1.000	
	ApA	-0.430	0.532	1.000
Lokoja	PoP	1.000		
	ApR	0.106	1.000	
	ApA	0.604	0.405	1.000
Laafia	PoP	1.000		
	ApR	0.515	1.000	
	ApA	0.450	0.855	1.000
Minna	PoP	1.000		
	ApR	0.473	1.000	
	ApA	-0.869	-0.358	1.000

Source: Computed from data in Appendixes A and B

This result suggests that the increase in the number of urban households does not relate significantly with increase in the demand for residential land from the government. While the results from the pairs of **ApR** and **ApA** indicate a fair correlation for Makurdi (0.532), weak correlation for Lokoja (0.405), a strong correlation for Lafia (0.855) and negative correlation for Minna (-0.358). This outcome also suggests that, the increase in the demand for residential land does not have a corresponding significant increase in the supply in Makurdi, Lokoja and Minna respectively while the outcome for Lafia suggests otherwise.

The coefficient of determination (r^2) between the pairs of **ApR** and **ApA** is measured to ascertain the proportion of the variation in one variable that is explained for by the other. Hence the r^2 for Makurdi, Lokoja, Lafia and Minna indicates that only 28.3%, 16.4%, 73.1% and 12.8% of total variation in the supply (**ApA**) of land by the government can be explained by the demand (**ApR**).

Table 3: *Coefficient of determination (r^2) of* ***ApR*** *and* ***ApA***

	r	r^2	%
Makurdi	0.532	0.283	28.3
Lokoja	0.405	0.164	16.4
Laafia	0.855	0.731	73.1
Minna	-0.358	0.128	12.8

Source: Computed from results in Table 2

Considering the outcome of the analysis in indicating inadequacy in the delivery of land by the government, an assessment is made here of the main sources of access to land in the selected states. The results in Table 4 have shown that, most respondents access their land through purchase from families that own land which accounts for the major source contributing about 31.2% of access in Makurdi, 37.2% in Lokoja, 32.9% in Lafia and 34.2% in Minna.

Table 4: *Sources of access to land*

Sources	Makurdi		Lokoja		Lafia		Minna	
	Freq	%	Freq	%	Freq	%	Freq	%
Inheritance/Gift	69	19.1	56	17.2	72	23.2	59	17.1
Family that owned Land	113	31.2	121	37.2	102	32.9	118	34.2
Private Individuals	97	26.8	87	26.8	78	25.2	102	29.6
Government	76	21.0	52	16.0	46	14.8	62	18.0
Plot Subdivision	7	1.9	9	2.8	12	3.9	4	1.2
Total	362	100	325	100	310	100	345	100

The ranking of the sources of access to land from aggregate results in the study area (Table 5) indicates that majority of the sampled landowners who acquired their land through families that own land is ranked first ahead of the other sources with a mean value of 113.5. This is followed by access through private individuals which accounts for the mean of 91.0 as the second most popular source. Plot subdivision is the least source with a mean of 8.0.

Table 5: *Mean distribution and ranking of sources of access to land*

Sources	N	Mean	SD	*Ranking*
Inheritance/Gift	256	64.0	7.70	3
Family that owned Land	454	113.5	8.35	1
Private Individual	364	91.0	10.67	2
Government	236	59.0	13.11	4
Plot Subdivision	32	8.0	3.37	5

Source: Computed from data in Table 4

Furthermore, following that access to land is mainly through sources outside the government provision*,* an assessment is made on the level of residential land development control. The first approach assessed the relationship between the total of number of applications for residential land granted *ApA* and the sum total of annual applications received for residential development permit *ApD* shown in Table 6. The variable *ApA* and *ApD* were measured here up to 2010 to accommodate the states where data were not available up to 2011.

Table 6: *Mean distribution and ranking of sources of access to land*

Location	*ApA*	*ApD*	Total
Makurdi	$8714_{(8911.1)}$	$4625_{(4427.9)}$	13339
Lokoja	$4841_{(4701.0)}$	$2196_{(2336.0)}$	7037
Lafia	$5593_{(5023.0)}$	$1926_{(2496.0)}$	7519
Minna	$6201_{(6713.9)}$	$3849_{(3336.1)}$	10050
Total	25349	12596	37945
	Pearson's X^2 statistic	338.53	
	DF	3	
	P	<0.0001	

The value of the statistic test of 338.53 at degree of freedom 3 and p = <0.0001 significant level indicates statistical evidence of variation in the number of allocations made for residential land and number of applications for residential development permits sought for within the study period. The result suggests that although many allocations were made for residential land, there was no corresponding increase in the applications for residential development permit made. The second approach assesses the residential landowners' statuses.

Table 7: *Respondents' status on building approval prior to development*

Location	Building Devt. Approved		Building Devt. Not Approved		Did not Applied for		Total
	Freq	%	Freq	%	Freq	%	%
Makudi	173	47.8	108	29.8	81	22.4	362
Lokoja	142	43.7	62	19.1	121	37.2	325
Lafia	114	36.8	72	23.2	124	40.0	310
Minna	162	47.0	99	28.7	84	24.3	345
Total	591		341		410		1342

Source: Field survey, 2013

Table 8: *Mean responses on building approval prior to development*

Option	N	Mean	SD
Building development approved	591	147.75	25.902
Building development not approved	341	85.25	21.777
Did not applied for permission	410	102.50	23.159

Table 9: *Household's access to facilities and services*

Option	N	Mean	SD
Electricity only	793	198.25	14.818
Electricity and water	335	83.75	11.089
Electricity, water, road and drainage	119	29.75	12.01
Waste management	95	23.75	4.031

Source: Field Survey, 2013

The mean responses of landowners who sought for planning permission prior to the development of their land (houses) is 147.75. This is followed by a mean of 102.50 for those who did not seek for planning permission but developed their houses. The least is the category that actually applied for permission but was rejected however proceeded to develop their lands. On the overall, 44.04% out of the 1,342 landowners sampled, obtained building development permit prior to the development, while 55.96% developed without permission.

Analysis on households' access to facilities and services indicates that a substantial number of households that developed their houses in the sampled areas have little or no access to basic facilities and services like pipe-borne water, waste management and good access roads.

Result from Table 9 shows a mean of 198.25 for households with access to electricity while only 23.75 have access to waste management facilities.

Table 10: *ANOVA of sources of access to land and household facilities*

Source of Variation		SS	df	MS	F	P-value	F crit
Sources of access to Land	Between Groups	182.95	3	60.983	0.073	0.973	3.239
	Within Groups	13311.60	16	831.975			
	Total	13494.55	19				
Access to households' facilities	Between Groups	388.25	3	129.417	0.020	0.996	3.490
	Within Groups	79625.5	12	6635.458			
	Total	80013.75	15				

Source: Field Survey and Analysis, 2013

The results from the ANOVA shows that the F-values of 0.073 for access to land and 0.020 for access to facilities are less than the Critical F-values 3.239 and 3.490 hence indicates no significant evidence of variation in the sources of access to land and facilities in the study area. Hence this suggests a similar trend in the sources of households' access to residential land and similar measure of access to facilities in the area.

Findings from the results so far have shown that the supply of land by the government for housing development is inadequate; and that government has only been able to supply 47.43% of the total demand between 1999 and 2010. The bureaucratic and inept performance of the government in the delivery of land has seemingly pushed a lot of urban dwellers to develop apathy against the government for land; thus increasing their patronage of the various informal sources. Statistical evidence also indicates that 55.96% of the sampled households have developed their houses without prior planning approval. Besides, a variation exist between the number of residential land granted and applications for residential development permit, indicating that most land granted are either developed without planning permission, held in speculation or abandoned due to economic factors. Whichever might be the case, developments on

such lands are uncontrolled or serve as waste dumpsites; aside from being commonly far off from general facilities i.e services, road, infrustructure, etc.

Conclusion and Recommendations

The study therefore concludes that the predominant source of access to residential land is through the informal land markets and developments on such lands have eluded government's effective planning and control. Hence, the pattern of access to land here has contributed significantly to the growing poor urban housing situation in the sampled North Central States of Nigeria. It is hereby recommended that government should make concerted efforts towards collaborating with the traditional institutions (Families that own land) to establish more development layouts and also trim down the heavily bureaucratic land administrative mechanism for ease of distribution, accessibility and development. These layouts and development control activities should be targeted at the rapidly developing sub-urban areas where owner-developed-and-occupied houses are prevailing so as to ensure a minimum set standard that will allow for future provision of facilities and services.

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APPENDIX

APPENDIX A: Annual Growth in the Number of Urban Households

	Makurdi	**Lokoja**	**Lafia**	**Minna**
Year	No of Households	No of Households	No of Households	No of Households
1999	50953	23135	46264	38172
2000	51361	23528	53261	38898
2001	52028	23928	53916	39637
2002	52705	24335	54579	40390
2003	45512	24125	55251	41157
2004	46104	24500	55930	40295
2005	46704	22167	51930	41302
2006	49242	28918	58915	52847
2007	51015	29757	60800	54643
2008	52851	30620	62745	58267
2009	54754	31508	64753	58422
2010	65027	34074	68076	64281

Source: Compiled from National Bureau of Statistics, 2013

APPENDIX B: Annual applications received for residential land and approval granted from 1999 2011

	Makurdi		**Lokoja**		**Lafia**		**Minna**	
Year	ApR	ApA	ApR	ApA	ApR	ApA	ApR	ApA
1999	2680	791	1192	192	715	435	732	850
2000	2978	974	1051	251	903	447	759	680
2001	2801	850	922	122	866	603	969	790
2002	1985	974	1159	359	813	598	691	980
2003	2825	730	576	276	725	572	546	730
2004	2675	798	862	76	822	615	624	703
2005	2185	768	1249	941	716	518	726	630
2006	2427	602	932	632	527	391	481	231
2007	1893	812	1031	738	799	493	441	332
2008	1606	781	1268	568	830	413	1166	113
2009	1784	634	978	686	824	508	1231	162
2010	978	498	1103	795	1324	1037	1108	392
2011	1023	762	-	-	-	-	968	522
Total	27,840	9,974	12,323	5,636	9,864	6,630	10,442	6,439

Source: Compiled from National Bureau of Statistics, 2013

ApR = Number of applications Received; ***ApA*** = number of approval granted

Note There were no availability of data for Lokoja and Lafia during the year 2011