

Mechanisms for Financing Incremental Housing in Nigeria: Case study of Ibadan, Nigeria

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Abstract

Access to housing finance by all income groups is essential for the provision of adequate shelter for all. The study examined the mechanisms for financing incremental housing for the low and moderate income households in Ibadan, Nigeria and their effectiveness with a view to providing information that could inform policy towards effective incremental housing delivery in the study area. Primary data was collected with the use of questionnaire from 742 respondents from 4 randomly selected suburban local government areas of Ibadan, Nigeria. Two sets of questionnaires were used to obtain the data needed for the study. The results of the quantitative data were presented in both descriptive and inferential statistics while qualitative data were contextually reported. The results for housing development of the low and moderate income groups occurred in phases with the incremental process taking as much as 8-12 years for construction while improvement of the existing structure took about five and a half years. Chi-square analysis with values being significant at $p < 0.05$ indicated the financing mechanisms for incremental housing construction at the level of foundation (0.007), main structure (0.0005), roofing (0.002) and internal fixtures (0.000) vary significantly with the exception of land purchase and drainage cum sewage stages. Funding for the incremental housing process can be improved if the socio-economic and traditional attributes of the people in the area are promoted. This needs to be encouraged as a way of directing the financing mechanisms devoid of interest rate and default risks to incremental housing.

Keywords: Development, Financing, Incremental housing, Income earners, Mechanism

Introduction

Housing is a basic and fundamental right that should not only provide shelter and space for households to live in privacy, security and dignity, but also serve as points of reference through which households can access other services and utilities. Housing in many of the developing nations has been functioning as springboard for human and economic development that impact on health, security, income flow and self-esteem of families (Drayton and Ashoka, 2008). According to UNHABITAT (2003), urbanization trend in developing world had reached levels in the order of 35% of its total population in the 1990s and were projected to reach about 57% by the year 2025. With the growing urban population and urbanization that is ahead of housing development and economic growth, majority of households are forced to live in informal settlements that are characterised by sub-standard housing, inadequate or absence of basic infrastructures and services, unauthorised land occupation, lack of building permit and /or a violation of building and planning regulations and lack of access to formal housing finance (Bitiir, 2008; UNHABITAT, 2008). Informal settlements in developing countries account for between 30% and 75% of all urban settlements (UNHABITAT, 2003).

In Nigeria, about 80% of the population lives in settlements that are unplanned with poor housing conditions (Housing National Technical Working Group Report, 2009). Reasons given for the worsening housing situation include rapid population growth, looming poverty and poor governance (Mushumbushi, 2011). Adequate housing finance is considered the most important factor in housing production because it helps to procure the essential components of housing, namely land, on-site

and off-site infrastructure, building materials as well as offsetting construction costs (UNCHS, 1996). Equally, UNHABITAT (2005) notes that finance is one of the important factors that ensure sustainable housing production that can fill the gap between the extreme outcomes of current systems and processes of affordable housing that is inadequate and adequate housing that is unaffordable. Desirably, efficient housing finance system for the low and moderate income groups would not only enhance sustainable management of the physical environment but also ensures economic prosperity, cultural integration and social equity (Erguden, 2001; UNHABITAT, 2005).

However, the precariously low income and the informality of the economy of lowest and moderate income groups constrained the capacity to secure and sustain funds needed for outright purchase or construction of housing (Ferguson and Smets, 2009). More than 80% of Nigerians earn US\$60 or less per month indicating that this proportion of the population cannot employ formal finance in their housing (Centre for Affordable Housing Finance, 2010). It is estimated that formal finance accounts for a mere 5-20% of housing finance in developing countries much of which is consumed by the top 20% of the income spectrum, which results in the production of no more than 10% of annual national housing totals (Okpala, 1994). The formal financial institutions prefer to lend to those with established credit records and regular incomes to ensure payment of monthly instalments as well as borrowers with some sort of collateral (UNESCAP, 2008). The unwillingness of formal housing finance institutions to offer credit and the inability of government to provide for their housing needs (even through the low-standard and low cost programmes such as site and services) have left individuals in the low and moderate income groups with no other choice than to find alternative option to their housing right by building incrementally and in phases over a long period of time and by employing incremental housing financing strategy that allows construction and improvement of dwelling using accumulated reserves of families and small short loans (Ferguson, 1999).

Over 70 % of the world's population in developing countries are said to be accessing shelter through incremental housing process (Ferguson, 2008). Gattoni, (2009) argue that incremental building process will continue to be how future generations build and how most of future housing stock will increase since it offers greatest opportunity for change in housing development. The approach could be by starting with a small unit and extending or building a larger unit slowly over time (Ferguson, 2008). A typical feature of this process is the household occupying an incomplete house with all other features gradually provided depending on availability of finance. In this situation, the families wait a long time before obtaining a complete house with all features and the waiting period may last for up to 15 years in some cases (Omirin, 1992). The motivating factor for incremental housing is said to range from the urge to own a house to underlying basic problem of lack of alternative (Bitiir, 2008). Incremental housing financing strategy represents the only affordable approach to shelter financing of most low-income households and many moderate income families who use personal and non-personal sources of fund (Ferguson, 2008a).

Incremental housing financing mechanisms not only finance steps in progressive housing but ensure the affordability, flexibility and sustainability of the process (Ferguson, 1999). This study examined the financing mechanisms for incremental housing of the low and moderate income families and factors that impact on the mechanisms in Ibadan, South Western Nigeria with a view to providing information that could inform policy towards effective incremental housing delivery in the study area.

Materials and Methods

Study area

Ibadan is situated in South-Western Nigeria (3° 45" to 4° 00" E; 7° 15" to 7° 30" N). It has two distinct seasons; dry (October – March) and wet (April – September). Ibadan is currently the capital city of Oyo State, it occupies a land area of 634.3 Km² and has a population of approximately 3.5

million (NPC, 2006). The findings and recommendations of this study may be relevant to other cities in the country and those of other cities in developing countries in Africa.

Types and Sources of Data

Data were specifically collected on household characteristics and the different sources of financing for incremental housing as well as variables that allow for the assessment of incremental housing financing mechanisms of the low and moderate income groups randomly selected local governments in the city. Information obtained were to establish understanding of the existing knowledge gap with respect to the research issues being investigated and to supplement the interviews and discussions made with the relevant independent sources (Mushumbusi, 2011). The information were obtained from Independent National Electoral Commission (INEC) and ministry of physical planning and planning authorities. Others include ministry of lands and housing and National Bureau for Statistics (NBS) for record on income distribution of households in the study area.

Instrument used for data collection

Data from primary sources involved direct observation, questionnaire administration, and in-depth interview. Direct observation was used to investigate the localities with houses undergoing incremental construction and financing. In all, 811 observational checklists were administered. Questionnaire data for the study were collected through the use of pre-tested set of questionnaires so as to ensure objectivity in the responses from the respondent. According to Olatubara (2009), experiences from the pre-testing exercise could engender a need for the refinement of the instrument to avoid ambiguities, to incorporate more information and streamline the classification and measurements of the different types employed. The pre-test was carried out in localities other than that of the study area but in the same socio-cultural and geographic vicinity to minimise bias in the main study. Two sets of questionnaire were administered for the study. The first set of questionnaire was served on owners of the houses or household heads of sampled houses in the selected localities. The second set of questionnaire was addressed to the provider of incremental housing financing. Those that were sampled were mainly money lenders, rotating savings and loan associations, cooperative societies, community groups, micro-finance institutions, material retailers and civil societies in the study area. The questions that were addressed include type of incremental housing loan granted, sources of fund, repayment period, interest rate and collateral requirements. The questionnaire was administered on randomly selected heads of the organisations so as to give every one of the provider organisations equal opportunity of being selected in the study area. Key person interviews was designed to give a sense of how individuals involved in housing administration perceived incremental housing financing as well as to develop a sense of overall institutional context within which incremental housing is being carried out. The interview was semi-structured to allow interviewees develop their ideas and speak freely on the issues raised. According to Bernard (2002), semi-structured interview is generally considered to be the best type of interview format when interviewing high level bureaucrats and elite members of the society. The issue of the role the government, formal finance market and financial self-help organisation played or can play in enhancing incremental housing financing was sought from the interviewees.

Sampling frame and size, sampling procedure

Mixed methods sampling technique, involving the use of both probability and purposive sampling strategies were employed in selecting the study area and household for the study. Probability sampling involves selecting a relatively large number of units from a population, or from specific subgroups of a population, in a random manner where the probability of inclusion for every member

of the population is determinable (Teddlie and Yu, 2007). Ibadan city was purposively selected for the study based on the fact that it is the largest in terms of spatial extent, occupied by black people in the sub-sahara region of Africa (Ayeni, 1997). The second level of selection is on the basis of local government areas; four local government areas (about 70%) out of the six that make up the suburban areas of the city were randomly selected based on the fact that ‘urban Ibadan’ is filled up and congested and new housing construction and development can only be found majorly in the urban fringe. The local government areas selected were Oluyole, Egbeda, Ona Ara and Lagelu (See Table 1). The list of communities in each ward was first compiled and random sampling technique was used to select 50% of the communities with ongoing developments. Where there was only one community in the selected ward with ongoing development, that community was purposively selected. Table 1 shows the sampled communities. A total of one thousand four hundred and eighty-four (1484) houses were identified. Fifty per cent (50%) of the number of houses counted constitute the sample size employed for the study. Seven hundred and forty-two inhabited houses were identified either under construction or improvement.

Table 1. Selected Wards, Communities and Sample size in the Study area

Local government	Wards selected	Communities with Developments	Selected Communities (50%)	Sample Size
Oluyole	Ward 1	Ayegun	Ayegun	22
	Ward 2	Odo-Ona Elewe, Idi-Iroko, Podo	Odo – Ona Elewe Podo	32 28
		Ward 5	Idi-Ayure, Odo-Ona Nla, CRIN, Toll gate, Odo-Ona kekere	Odo Ona Nla CRIN Odo-Ona kekere
	Ward 10	Arapaja	Arapaja	39
	Egbeda	Ward 5	Olodo,	Olodo
Ward 7		Wakajaiye	Wakajaiye	32
Ward 9		Egbeda	Egbeda	51
Ward 10		Alakia, Olode	Olode	34
Ona Ara	Ward 1	Akanran, Olorunda	Akanran	25
	Ward 3	Badeku	Badeku	41
	Ward 11	Odi-odeyale, Amuloko, Idi-Osan,	Amuloko Idi-Osan	26 55
Lagelu	Ward 4	Ejioku, Igbon, Ariku	Ariku	46
	Ward 5	Lagelu market, Kajola	Lagelu market	35
	Ward 6	Lagun	Lagun	24
	Ward 7	Lalupon 1	Lalupon 1	33
	Ward 8	Lalupon 11	Lalupon 11	46
	Ward 9	Lalupon 111	Lalupon 111	55
Total	17		21	742

Source: Authors’ field survey (2019)

Sample Frame

In order to determine the sampling frame, the visual technique of selection was employed with the aid of summary chart earlier prepared on incremental housing process linking key factors. This study was limited to houses under current construction or improvement that are inhabited so as to reduce

bias that might result in remembering issues relating to financing of incremental housing where such owners had completed their houses long ago or uncompleted houses where construction or improvement process had stopped long ago. One, the relatively high rate of transfer of plots and houses in these variants will prejudice or mask the findings of the study and two, the need to reduce the scope of the study itself.

Data Analysis

The data collected in both ordinal and interval scales were analysed using the descriptive and inferential statistics. The descriptive statistics adopted frequencies, tables, bar charts, percentages and graphs to show data generated in the study. The inferential statistics used the bivariate and multivariate analytical techniques to draw inferences on the data collected from the study areas. Chi-square, was used in testing the hypotheses. In order to test the hypothesis, statistical analysis, which investigated main sources of finance for incremental housing was carried out. The analysis of the focus group discussion, key person interview and the open-ended conversation followed the steps stated by Dawson, Manderson and Tallo (1982), quoted by Alabi (2009).

Results and Discussion

Nature and Scope of Financing Mechanisms

Low and moderate income households join wide variety of sources to build their houses. The sources are not mutually exclusive of one another but a stage could use one or more or all the sources. Table 2 shows the different sources of informal housing finance mechanisms employed in incremental construction process in the study area. From the response of the household heads, the major sources of financing indicated have been grouped into savings, financial assistance from family and friends, informal credit market, formal credit market and other sources such as barter arrangement, community self-help among others. Here savings took the highest proportion of the housing finance mechanism being employed.

Table 2. Proportion of Respondents Employing the Financing Sources for the Different Stages of Construction

Stage of construction	Savings		Family Assistance		Informal credit market		Formal Credit Market		Others	
	Freq.	%age	Freq.	%age	Freq.	%age	Freq.	%age	Freq.	%age
Land Purchase	569	76.7	106	14.3	49	6.6	8	1.1	10	1.3
Foundation	602	81.1	102	13.7	24	3.2	8	1.1	6	0.8
Super Structure	537	72.4	127	17.1	53	7.1	16	2.1	12	1.6
Roofing	557	75.1	123	16.6	54	7.3	6	0.8	8	1.1
Internal Fixtures	590	79.5	85	11.5	56	7.5	6	0.8	5	0.7
Drainage & Sewage	654	88.1	52	7.0	26	3.5	2	0.3	8	1.1

Note: The percentage does not add up to 100 because of multiple sources used by individual household
Source: Fieldwork (2019)

Savings

A quick glance at Table 3 shows savings consistently taking over 70% of respondents' source of incremental housing finance. The implication of this is that there is lack of appropriate housing

finance scheme for the low and moderate income groups and thus the available option is to save and build. Savings has been mentioned as source of fund for land purchase foundation, super-structure, roofing, internal fixtures, drainage and sewage by over 80% of the household heads in the study area.

The prevalence of savings over other sources of financing might not be unconnected with the avoidance of risk of not being able to meet loan repayment due to income irregularity by the low and moderate income households. Equally, the use of savings is higher in some stages than the other as shown in Table 3. More households used savings during foundation and super/main structure compared to other stages in the study area. Fewer savings was needed for the building of drainage and sewage than was the case in the construction of other aspects. In the study area only 88.1% indicated savings for drainage and sewage. These findings corroborated studies in literature in which savings is used the more in early stages of construction than in the later stages (Smets, 2004; Sheuya, 2007). The progressive construction strategy of the incremental building process is equally said to be a saving mechanism as household resources or cash are converted into structure such as foundation, walls and others that can be built and left for the next stage while more resources are gathered. In this way, households' cash is protected from emergencies and consumption (UNHABITAT, 2005; Mitlin, 2008).

Table 3. Specification of Savings, Family Assistance, Informal credit and Formal

Financing Mechanism	Frequency	Percentage%
Savings		
Cash/Sale of Property	523	70.5
Material Purchase /Storage	619	83.4
Own Labour/ Sweat Equity	682	91.9
Others	59	8.0
Family Assistance		
Cash Donation/ Remittance	119	16.0
Interest Free Loan	87	11.7
Material Donation	76	10.2
Labour Contribution	134	18.1
Others	7	0.9
Informal Credit		
Saving and Loan Association	43	5.8
Microfinance	17	2.3
Community Fund	21	2.8
Cooperative Credit	67	9.0
Material Credit	59	8.0
Others	11	1.5
Formal Credit		
Mortgage	4	0.5
Commercial Bank	7	0.9
Insurance/Pension	3	0.4
Others	4	0.5

*Note: * Others include unidentified sources but the source was mentioned by the Interviewees*

Source: Fieldwork (2019)

Other forms of saving employed in incrementally built houses in the study area include sweat equity or labour contribution by the households to the construction activities to save cash that would have been expended on such labour. (Table 3) Involvement in the fabrication of the building material such as block moulding, gathering of sand, supply of water and other less specialised aspects of the construction process is equally typical of households in the study area.

From Table 3, an indication of a good mix of the different forms of savings utilised by respondents is reflected and not less than 70% of the respondents agreed to use the three dominant types of savings in their incremental housing financing. This situation is not unconnected with low level of income and the need to protect housing savings from other household essentials such as health, education and feeding. Own labour/sweat equity had the highest (91.9%) usage. Close to three quarter (70.5%) of the respondents agreed to be using this source of financing.

Family Assistance

Table 3 presents the proportion of respondents employing family assistance in financing the different stages of incremental housing construction. From the table, more respondents obtained family and friends assistance during foundation, super/main structure and roofing that are capital intensive than in other stages of incremental housing construction. From Table 3, a consistent rise in the proportion of assistance can be seen from land purchase to super/main structure in the study area and this declining from roofing stage to drainage and sewage stage. The trend in the study area as the application of family assistance still progressed to roofing stage before declining. The generally observed trend might not be unconnected with the importance attached to these stages by family and friends and the belief that a house is completed as soon as it is roofed. Therefore, the owner can be left to manage the construction process with little or no assistance again. The influence of family assistance on incremental housing financing was captured in FGD by the view of participant 6 in Arapaja in Egbeda LGA, a 51 years old grade level 05 female civil servant, who stated that:

“As a widow with four children in school, my junior brothers and sisters in overseas had helped me to complete my house to the level it is now though not yet plastered”

The different types of family and friends’ assistance used in financing incremental housing are depicted in Table 3. A cursory look at Table 3, cash donation/remittances from family and friends had the highest proportion. Labour contribution which has the highest proportion (18.1%) among the different forms of family assistance might not be unconnected with the traditional practice related to voluntary assistance and reciprocal exchange that is still highly embraced in moderately urbanised localities in South-western Nigeria, where people of the same trade or town union or of the same social or religious group freely assist one another when embarking on developmental project such as housing.

Informal Credit Market

Informal credit market cuts across a continuum from purely commercial relations as in commercial lenders to purely social relations as in cooperative practice. This source includes financing mechanisms such as informal savings and loans association credit (5.8%), micro-finance institutions credit (2.3%), and community funds credit (2.8%) and cooperative association credit (9.0%). Others include material credit from retailer/wholesaler/micro-finances (8.0%) and credit advancement (1.5%) as in anticipation of agricultural produce harvest. From Table 4, informal credit market

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facilities were applied to the different stages of incremental construction in the study area. The application of this financing mechanism rose progressively from land purchase (6.6%) to super structure (7.1%) to roofing (7.3%) up to internal fixtures (7.5%) and but declined at foundation stage (3.2%) and drainage to sewage (3.5%). This might be due to the level of income and possibly the prevalence of encouraging environment for this type of credit thus making it available for the smoothening of financial flow in the localities in the study area.

Table 4. Distribution of Financing Mechanisms across Construction Stages and LGAs

LGA	Savings	Family Assist.	Informal Credit	Formal Credit	Others	Deg. of Freedom (d.f)	Chi-Square/ (P-value) /Remark
<i>Land Purchase</i>							
Oluyole	152(78.4)	25(12.9)	12(6.2)	2(1.0)	3(1.5)		
Egbeda	112(57.4)	56(28.7)	20(10.3)	3(1.5)	4(2.1)		17.324
Ona-Ara	156(81.3)	23(12.0)	9(4.7)	2(1.0)	2(1.0)	12	0.067
Lagelu	149(82.2)	22(12.2)	8(4.4)	1(0.6)	1(0.6)		Not sign.
<i>Foundation</i>							
Oluyole	123(79.4)	23(14.8)	6(3.9)	2(1.3)	1(0.6)		26.034
Egbeda	205(77.7)	46(17.4)	8(3.0)	3(1.1)	2(0.8)	12	0.007
Ona-Ara	152(85.9)	17(9.6)	4(2.3)	2(1.1)	2(1.1)		Sign.
Lagelu	122(83.6)	16(10.9)	6(4.1)	1(0.7)	1(0.7)		
<i>Super-Structure</i>							
Oluyole	152(75.6)	29(14.4)	13(6.5)	4(2.0)	3(1.5)		45.568
Egbeda	205(74.5)	38(13.8)	21(7.6)	7(2.5)	4(1.5)	12	0.0005
Ona-Ara	84(64.6)	31(24.8)	11(8.5)	2(1.5)	2(1.5)		Sign.
Lagelu	96(69.1)	29(20.9)	8(5.8)	3(2.1)	3(2.1)		
<i>Roofing</i>							
Oluyole	153(79.3)	26(13.5)	12(8.2)	1(0.5)	1(0.5)		
Egbeda	201(73.4)	47(17.1)	21(7.7)	2(0.7)	3(1.1)	12	31.452
Ona-Ara	111(74.5)	23(15.4)	11(7.4)	2(1.3)	2(1.3)		0.002
Lagelu	92(69.7)	27(20.5)	10(7.6)	1(0.7)	2(1.5)		Sign.
<i>Internal Finishes</i>							
Oluyole	121(73.8)	24(14.6)	17(10.4)	1(0.6)	1(0.6)		
Egbeda	168(74.7)	34(15.1)	19(8.4)	2(0.9)	2(0.9)	12	41.863
Ona-Ara	154(86.5)	12(6.7)	9(5.1)	2(1.1)	1(0.6)		0.000
Lagelu	147(84.0)	15(8.5)	11(6.3)	1(0.6)	1(0.6)		Sign.
<i>Drainage & Sewage</i>							
Oluyole	126(86.3)	12(8.2)	6(4.1)	-	2(1.4)		
Egbeda	221(88.4)	15(6.0)	10(4.0)	1(0.4)	3(1.2)	12	21.057
Ona-Ara	185(89.8)	13(6.3)	6(2.9)	-	2(1.0)		0.056
Lagelu	122(84.7)	12(8.3)	4(2.8)	1(0.7)	2(1.4)		Not Sign.
<i>Overall/Ave.</i>							
Oluyole	113 (76.9)	19(12.9)	11(7.5)	2(1.4)	2(1.4)		
Egbeda	167 (75.9)	30(13.6)	17(11.6)	3(1.4)	3(1.4)		
Ona-Ara	114(80.3)	16(11.3)	8(5.6)	2(1.4)	2(1.4)		
Lagelu	97(75.8)	20(15.6)	8(6.2)	1(0.8)	2(1.6)		

Source: Authors' Computation (2019) Note: Percentages in brackets

Table 3 indicates the proportion of the different types of informal credit market facility used by the respondents. A quick look at the table shows that informal credit market facilities were more from informal savings and loan associations, cooperative associations and material credit. The use of cooperative association credit and material credit were similarly embraced in the study area while microfinance and community credit were lowly embraced by households in the study area.

Material credit from retailer or micro-finance institution is gradually gaining acceptance as an informal credit market facility that can be used in financing incremental housing as some respondents claimed neighbourhood cement seller, block makers plank sellers etc advanced materials to them which they gradually paid for at an immediate future time. This low proportion is perhaps due to newness of this informal market credit facility in the study area as micro-finance institutions only evolved from community banks in 2007.

Formal Market Credit

Formal credit market is dominated by formal financial institutions that grant traditional mortgage finance loan over a long term (10 to 30 years) at market interest rate with adequate collateral in the form of a first lien on real property which the financial institutions can be effectively foreclosed without egregious costs in resources and time (Ferguson, 1999). Formal credit market considered in this study includes mortgage institutions, commercial banks, insurance / pension fund companies and others. Table 2 shows that formal credit market facilities are applied to all the different stages of incremental construction, though at a very low rate of less than 1% in the study area. From Table 3, more of the respondents in the study area agreed to have used formal credit market facility of commercial bank than others. In the study, mortgage institutions (0.5%), commercial bank (0.9%) and insurance (0.4%) and pension funds were all employed while only commercial bank credit and others were used by other respondents. The few respondents obtained on formal credit are possibly those that are in public sector or organised private sector employment that could meet the conditions of granting credit facilities by these formal financial institutions.

Other Sources of Financing Incremental Housing

Other sources of finance for incremental housing in the study area include barter arrangements, community self-help arrangements and others. According to Table 2, these forms of incremental housing financing sources accounted for less than 7% in all the different stages of incremental housing construction. This development is probably due to changing cultural value that encourages individualism over collectivism or communalism.

Pattern of Finance Mechanisms for Incremental Housing

Shown in Table 3 are the χ^2 values from the cross tabulations of local government areas with the incremental financing mechanisms for each stage of the housing process. From the cross tabulation in Table 3, it is evident that Lagelu uses more savings for land purchase; Ona-Ara uses more savings for foundation; Oluyole uses more savings for super/main structure and roofing, while Ona-Ara uses more savings for internal fixtures and drainage than all other LGAs. Equally, Ona-Ara leads in the use of savings for foundation. Family assistance is applied the more in Egbeda for foundation, Informal credit facilities application is highest in Lagelu for foundation, formal credit facilities is highest in Oluyole for foundation while Ona-Ara leads for other sources for foundation. In the same vein, Oluyole leads in the use of savings for superstructure. Family assistance and Informal credit

facilities are applied the more in Ona-Ara for superstructure, formal credit facilities is highest in Egbeda for superstructure while Lagelu leads for other sources for superstructure.

For roofing, Oluyole leads in savings; Lagelu has the highest in family assistance, while Oluyole has the highest in informal credit facilities. Ona-Ara has highest in formal credit while Lagelu has highest in others for roofing. In the same manner, for internal fixture; Ona-Ara has the highest in savings, Egbeda has the highest in family assistance; Oluyole has the highest in informal credit facilities, Ona-Ara has the highest for formal credit while Egbeda has the highest for others for internal fixtures.

For drainage; Ona-Ara has the highest for savings; Lagelu leads in the use of family assistance by households, Informal credit facilities application is highest in Oluyole for drainage and sewage while Lagelu has the highest use of formal credit facilities and others in drainage. On the overall average, Ona-Ara has the highest overall average in the proportion of the households using savings. Lagelu has the highest proportional use of family assistance. Egbeda leads in the use of informal credit market and formal credit market while Lagelu leads in others. Arising from the cross tabulation in Table 4 is the chi-square values. It shows chi-square values being significant at $p < 0.05$ for all the stages of incremental housing construction except land purchase and drainage. This development could be due to these two stages marking the commencement and the end of the core house where reliance could be solely on self in providing fund for the stages. Therefore, our hypothesis which states that there is difference in incremental housing financing mechanisms across the area is accepted.

Table 5. Financing Mechanisms Employed for the Different Phases of Improvement

FINANCING SOURCE Stage /location	Savings		Family Assistance		Informal credit mkt		Formal credit mkt		Others	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Addition of rooms	200	33.9	22	31.4	12	20.7	6	37.5	1	11.1
Fix Roof	102	17.3	19	27.1	11	18.6	5	31.3	1	11.1
Plaster walls	82	13.9	14	20.0	13	22.4	1	6.3	1	11.1
Fix Utilities	96	16.3	6	8.6	10	17.4	2	13.0	6	66.7
Fix floors	74	12.6	5	7.1	7	12.1	1	6.5	0	0.0
Fix doors	35	5.9	4	5.7	5	8.6	1	6.5	0	0.0
Total	589	100	70	100	58	100	16	100	9	100
Overall Total	589	79.4	70	9.4	58	7.8	16	2.2	9	1.2

Source: Fieldwork (2019)

Financing Mechanisms for Incremental Housing Improvement Process

A glance at Table 5 shows that among those that have embarked on improvement; savings was applied by over 79% consistently for more of the respondents in the study area. This shows the role of savings in incremental improvement and housing process. This perhaps corroborates the assertion that for those who build their own houses, finance for construction comes mainly from personal savings. Family assistance for improvement comes mainly in the form of cash donation or remittance from relatives and friends, granting of interest free loan, donation of labour or building materials and others. From Table 5, not less than 5% of family assistance was applied by those that embarked on improvement of their houses in all the different phases of incremental improvement in the study area. Family assistance had the highest of 27% in the study area for addition of room /shop

and fixing of roof. From the Table 5, respondents used formal credit market such as mortgage bank, commercial bank, insurance or pension fund for financing improvement. A critical glance at Table 5 shows a generally low usage of the facilities which accounted for 2.2% of the total respondents in the study area. Addition of room/shop and fixing of roof attracted the highest proportion of 37.5% and 31.3% respectively. Other sources of funding for improvement are barter arrangement and community self-help. These were rarely employed except for addition of room, fixing of roof, plastering of walls and fixing utilities. Community solidarity is equally employed in financing improvement during emergencies or major disasters where groups donate materials to individuals during fire, wind storm, flooding and others.

Financing Mechanisms Expenditure for Incremental Construction Process

Presented in Table 6 is the estimated average amount from different financing mechanisms expended for incremental construction process in the study area. A quick insight into the table shows the relative importance of savings. Savings has the highest (44.0%) contribution to the average estimated amount for the incremental construction process in the study area. Next to savings is the informal credit facilities in terms of amount obtained for the progressive housing of the low and moderate income groups which accounted for (24.0%). The application of family assistance and formal credit facilities amounted to not less than 13.0 percent each of the contribution to the average estimated amount for the incremental construction process in the study area. The estimated construction cost of construction in the study area is ₦2, 023,416 and at current exchange rate of ₦ 350/US\$ it amounts to \$5781.33. The huge amount required, probably accounted for the long period it takes the households in completing the construction process. Similarly, the FGD brought out diverse view from the discussants on the cost of building incremental house in the localities. Cost of inputs such as land, building materials and capital, the size, quality and time of building were identified as responsible for the variation in cost.

Table 6. Different Mechanisms Employed in Financing Stages in Incremental Construction

Const. Location	Average Amount / Standard Deviation () in N						Total
	Stage	Savings	Family Assistance	Informal Credit	Formal Credit	Others	
Land Purchase		242769	29543	56756	35435	26574	391077 (19.3%)
Foundation		204675	32143	38427	29300	-	214545 (10.6%)
Super/Main Structure		287546	74927	151346	70000	-	583819 (28.8%)
Roofing		102792	34284	79742	31074	48000	295892 (14.6%)
Internal Fixtures		79057	56174	64872	35000	-	235103 (11.6%)
Drainage and Septic Tank		82128	35871	94796	62037	28148	302980 (15.0%)
Overall Average		907292 (44.0%)	262942 (13.0%)	485939 (24.0%)	262846 (13.0%)	102722 (6.0%)	2023416 100%

Source: Fieldwork (2019)

The absence of uniform cost and its higher trend in the study area was well captured by participant 3 in Olosan in Egbeda, a middle-aged male artisan with secondary school leaving certificate who stated thus:

“When I was constructing my 3 rooms and a parlour house 15 years ago it only cost me about N800,000 to the roofing level but my friend who has just roofed the same type of building has spent N1,700,000 over the period of 5 years that he started the work”

Financing Mechanisms Expenditures for Incremental Improvement Process

From Table 7, incremental improvement process is financed by different sources of fund like in incremental construction process. In the study area, savings accounted for about 35% of the improvement, which is personal incomes available to the household such as personal savings from regular employment, rental income, home based enterprise income and others, while family assistance accounted for about 19% in the study area, Informal credit market accounted for more than 25% in the study area which is the highest while formal credit accounted for not less than 15% in the study area. In all, the estimated amount for improvement in the study area is ₦1, 449,345 (US\$4,141) as presented in Table 7.

Table 7. Different Mechanisms Employed in Financing Stages in Incremental Construction

Average Amount from different sources used for improvement purposes						
Improvement Location	Savings	Family Assistance	Informal Credit	Formal Credit	Others	Total
Addition of Room	95557	38212	106435	41295	29451	311068 (21.5%)
Fixing of leaking roof	92435	56215	82695	61000	-	292345 (20.2%)
Plastering of Wall	72195	59295	92125	35000	71256	5932679 1 (22.5%)
Provision of Utilities	68180	49011	18057	56000	-	191248 (13.2%)
Repair of Floor	72000	32134	57290	12015	-	173479 (12.0%)
Fixing of Door and Window	79294	32435	25235	17450	-	154414 (10.6%)
Total	499779 (34.4%)	267302 (18.4%)	382037 (26.3%)	222760 (15.3%)	100707 (6.9%)	1449345 100%

Source: Fieldwork (2019)

Incremental Housing Process and sources of Incremental Housing Financing

From the descriptive analysis, majority of respondents in incremental construction process use savings for the different stages, with savings consistently being employed by over 70 % of the households. Family assistance has the highest application by the households in super/main structure and Internal Fixtures/ Finishes. Similarly, informal credit is also highest for super/main structure and Internal Fixtures/ Finishes while formal credit is highest for drainages, super/main structure, roofing and Internal Fixtures/ Finishes. Chi-square test also shows that there is significant difference in the proportion of the sources of financing used across the different stages of incremental housing,

which could be due to importance attached to the different stages by households, family and friends and credit assistance granting organisations. Chi square value of 75.659, which is significant at $p < 0.01$, was obtained for incremental construction. This means that there is variation in incremental housing financing sources and the incremental housing process. Improvement on the other hand shows no significant difference with the χ^2 test.

Table 8. Housing Process (Stages) and Mechanisms for Incremental Housing Financing

Housing Stages	Savings	Family Assistance	Informal Credit	Formal Credit	Others	Degree of Freedom (d.f)	Chi-Square χ^2 Remark
Construction							
Land Purchase	597(80)	102(14)	32(4)	7(1)	4(1)		
Foundation	597(80)	95(13)	36(5)	5(1)	9(1)		75.659
Super structure	566(76)	112(15)	45(6)	12(2)	7(1)	20	(0.000)
Roofing	600(81)	87(12)	35(5)	15(2)	5(1)		Sign.
Finishes/Internal Fixtures	575(77)	110(15)	42(6)	11(2)	4(1)		
Drainage	582(78)	94(13)	51(7)	12(2)	3(1)		
Improvement Location							
Addition of Room	216(78)	35(13)	15(5)	7(3)	2(1)		
Fixing of leaking roof	240(87)	21(9)	11(4)	3(1)	1(0)		
Plastering of Wall	235(85)	25(9)	12(4)	3(1)	3(1)		15.472
Provision of Utilities	159(79)	29(14)	10(5)	1(1)	1(1)	20	0.614
Repair of Floor	184(79)	32(14)	13(5)	2(1)	2(1)		Not
Fixing of Door and Window	95(80)	15(13)	7(6)	1(1)	0(0)		Sign.
Others	15(79)	15(11)	1(5)	1(5)	0(0)		

Source: Fieldwork Analysis (2019)

Note: % in bracket

Household’s Perspective to Non-Personal Financing Mechanisms

Source of finance for incremental building process is wide and varied, ranging from personal sources to non-personal sources. In this section, non-personal sources of funds for progressive housing are examined in details based on the household’s perspective. The non-personal sources considered are finances through self-help organisations or informal credit market and the formal credit market.

Financial Self-help Organisations

The distributions of the financial self-help organisations in the study area, according to the household heads, are shown in Figure 1. From Figure 1 financial self-help organisations assisting in financing incremental housing were identified in the study area. Informal savings and loan associations accounted for 22% of the identified organisations in the study area. Microfinance institutions accounted for 7% of the identified organisations in the study area while Community savings and loan associations on the other hand accounted for 8% of the identified organisations in the study area. Cooperative societies with the highest proportion accounted for 43% of the identified organisations while Religious and social groups have 18% in the study area. Material credit granting organisations accounted for 1% of the identified organisations in the study area. Generally, a fair number of cooperative societies (43%) and informal savings and loan associations (22%) were identified in the study area as assisting the low and moderate income households in their incremental

housing financing while there are limited and religious/social group (18%) microfinance institutions (7%) offering housing financial assistance. Cooperative societies and informal savings and loan associations accounted for over 60 % of the identified organisations by respondents. The very low number of material credit giver (1%) identified is possibly due to non-recognition of their services as a financial service by respondents as many believed it to be normal sales transaction. This was corroborated by the view of participant 2 in Lagelu LGA, an Artisan in his forties with primary education who stated thus:

To me the neighbourhood building materials business outlets are only exploiting us to sell their goods and equally milking us with the extra charges they normally add to their cash price because we are not buying in bulk. I do not believe they are rendering any financial assistance to us at all.

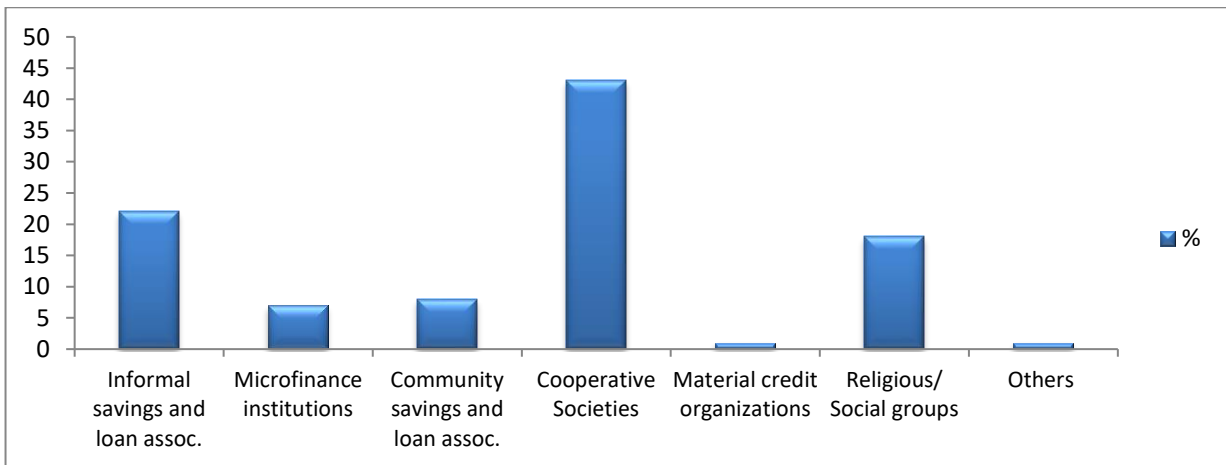


Figure 1. Financial self help Organisations identified by Respondents. Source: Fieldwork, 2019

Regarding the adequacy of credit from financial self-help organisations and its regularity in meeting incremental housing construction and improvement, many of the respondents are of the view that the credit was never adequate and regular. Additional sources of funds used by respondents in complementing inadequate financial assistance from financial self-help organisation include savings, donations, remittances, rent advances and others.

Collateral Requirement of Financial Self-Help Organisations

Collateral is an asset pledged in respect of a credit facility obtained from a lender. It is to reduce the lender's risk for the credit granted. Some of the identified collateral required by self-help organisations by UNHABITAT (2005), include land title and buildings, lien on assets, obligatory savings, assignment of future income or wages, personal guarantees or co-signers, joint liability and group guarantees and other financial assets such as life insurance policies and pension fund. This is shown in Figure 2. However, high reliance on savings could possibly be for it to serve as a means of ensuring repayment by the borrower as savings shows the capacity of the borrower to make regular repayments and accumulate sufficient funds for required down payments as most borrowers may be dispersed and not be in the same neighbourhood.

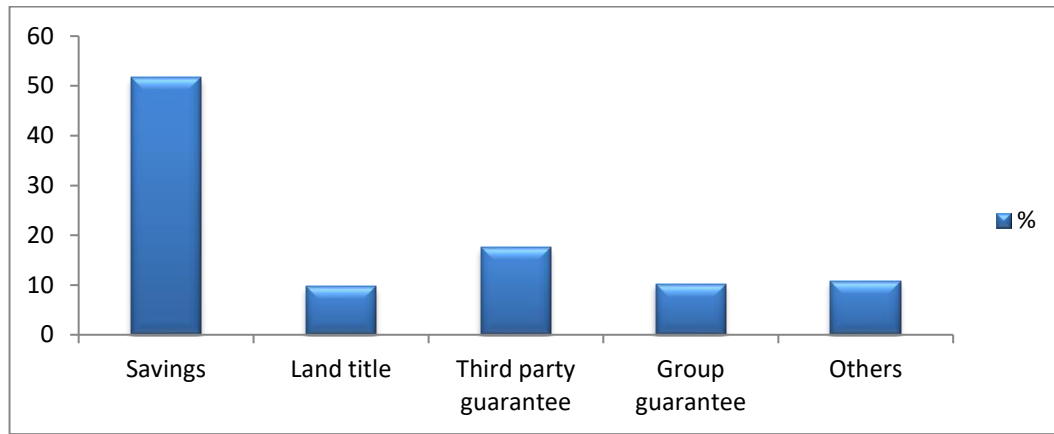


Figure 2. Collateral Required for Credit by Financial Self Help Organizations. Source: Fieldwork, 2019

Providers’ View Point of Incremental Housing Financing

In order to evaluate the activities of these organisations, and with the help of household heads questionnaire was administered to the identified organisations offering such assistances in the study area. 75 organisations were identified in the study area and they include; cooperative societies, microfinance institutions, credit unions, rotating savings and credit associations, accumulated savings and credit associations, material retailers among others. Figure 2 presented these organisations according to the nature of their business. From Figure 3, 17.3% of the organisations in the study area were involved in mobilisation and granting of loans, 6.7% in mobilisation of deposit and granting of mortgage credit, 5.3% in granting of credit facility alone, 69.3% in granting of material credit and 1.3% in other forms of credit provision.

Material credit was the highest proportion identified, among the organizations. This shows that the commonest assistance the low and moderate income families obtained in incremental housing process in their localities is material credit from cement seller, plank seller, block makers, sand and gravel suppliers, retailer of plumbing and electrical materials and others on terms of half down - payment and balancing of outstanding payment at the end of the month or when fund is available.

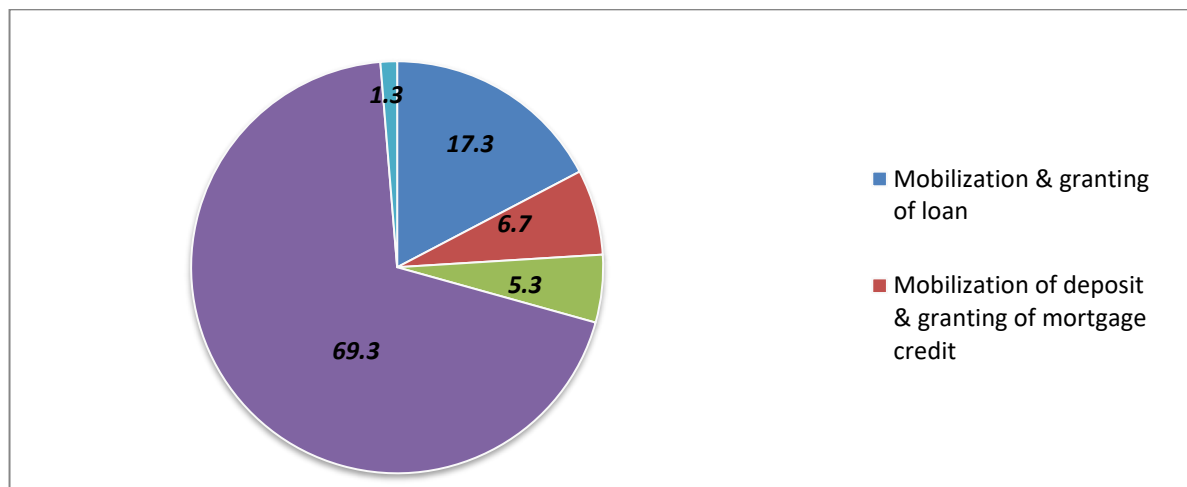


Figure 3. Business Nature of Organisations Providing Credit. Source: Fieldwork, 2019

This finding suggests that interventions aimed at promoting housing financing in the informal urban localities could also target the opportunities offered by material credit retailers. The material credit is an option, which financial institution including formal and microfinance seemed not to have exploited. Other forms of assistance identified include produce merchants that advance credit either in cash or kind to produce farmer in exchange or pledge from the farmers to pay back with produce during the harvest season.

Loan Conditions and Criteria

There are a number of requirements that must be met to enable the borrowing households obtain credit as well as collateralised the risks and constraints associated with giving out the credit by borrowing organisation for eligibility criteria for the credit facilities granted by the fund providers. According to Escobar and Merrill (2004), these arrays of requirements include but not limited to client history and track record with the same organization, family income estimate, client ownership of the home or land, savings account, technical assistance and host of others. Consistently, more than four-fifth (96%) of all the organisations identified applied the criteria of regular and verifiable income secure tenure, repayment capacity and minimum savings deposit in granting credit in the study area. From Figure 4, it can be seen that there is high proportion of the organisations that apply regular and verifiable income and repayment capacity compared to savings period and savings deposit requirement. This situation is not unexpected considering the proportion of the assistance obtained in the form of material credits which may merely request for the evidence of regular and verifiable income, repayment capacity and in some cases secure tenure to grant credit. While the minimum saving period and minimum savings deposits are common requirements of the savings and loan organisations, deposits and mortgage credit organisations and credit alone organisations in addition to other requirements of the material credit organizations.

Loan terms and Conditions

From Table 9, interest charged by organisations in the study area ranged between 6% to over 20%. In the study area, over 20% interest rate accounted for the highest and was closely followed by 10% interest rate, with 6% interest rate charge being the least applied by the organisations.

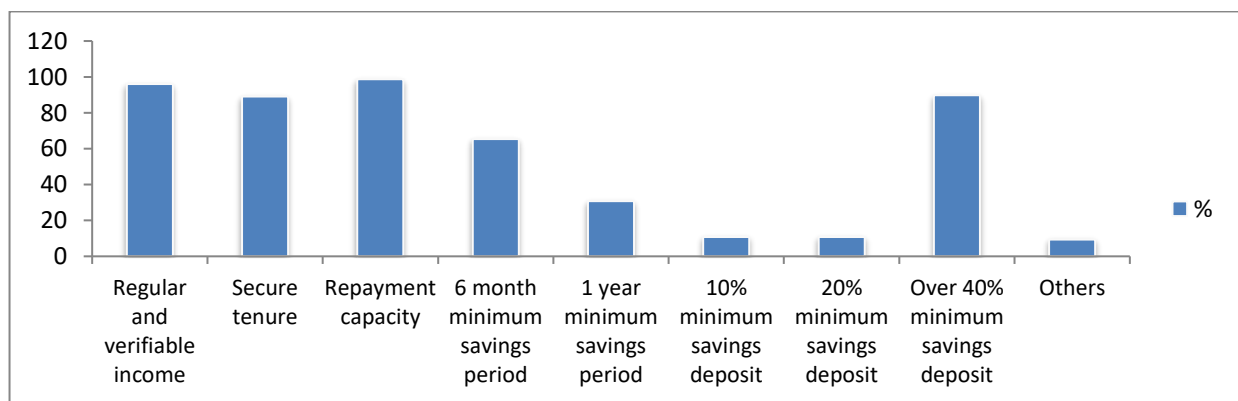


Figure 4. Loan Conditions and Criteria
Source: Fieldwork, 2019

Table 9. Loan Terms and Conditions Applied by Organisations

Loan term and Condition	Total	
	Freq.	%
Interest charged		
6%	4	5.3
10%	24	32.0
15%	19	25.3
20% and above	28	37.3
Collateral required		
Savings	69	92.0
Land title	21	28
Third party guarantee	56	74.7
Others – shares, other assets	7	9.3
Moratorium		
0 month	26	34.7
3 months	29	38.7
6 months	21	28.0
Amortization		
12 months	35	46.7
24 months	21	28.0
36 months	15	20.0
Over 36 months	4	5.3

Source: Author's Fieldwork, (2019)

From Table 9, collateral requirement is another condition applied in credit disbursements while savings, third party guarantee and others such as shares or any other assets were highly favoured as collateral for credit. The organisations in the study area applied savings: 92%; land title: 28%; third party guarantees 74.7% and applied other means such as shares and jewelleries: 9.3%. The high proportion of organisations requiring savings is to ensure that repayment of the credit is secured while third party guarantee is also to secure the credit in case of default although Merret and Russel (1994) argued that third party enforcement may be difficult and ineffective. Equally, the use of other assets such as shares and jewelleries is also to provide cover for the borrower in case of default. The high proportion of material retailer credit possibly explains the dominance of savings and third party guarantee as collateral. Moratorium period is a period in which the agreement upon that payment would not commence. Payment at the onset of the loan accounted for 34.7% while allowance of resting period of 3 months accounted for 38.7% while that of 6months accounted for 28.0%. The commonest being 12 months as this was indicated by 46.7% in the study area. Following this is 24 months with 28.0%, 36 months with 20.0% and over 36 months with 5.3% a development that might be due to the low capital base of most of the organisations and the need for replication.

Loan Constraints

Figure 5 indicates the constraints on the path of delivery of housing credits by the organisations offering assistance to the low and moderate income groups in their incremental housing financing. From the figure, the major constraints identified were land/tenure security and low level of income while low capital base and loan awareness were only moderately mentioned by the organizations. Other less prominent constraints were cost of land, loan diversion, lack of technical assistance and monitoring, loan delinquency rate, building codes and planning regulations and others. The need to ensure that there is no eviction or demolition or litigation on the property while the loan is still subsisting constrained availability of the credit from organisations assisting the low income group.

Cost of land

In Figure 5, 28% of organisations offering assistance to the low and moderate income groups indicated this as a problem in the study area. Affordability issue was being raised by 77.3% of the organisations in the study area as constraining delivery of housing credit.

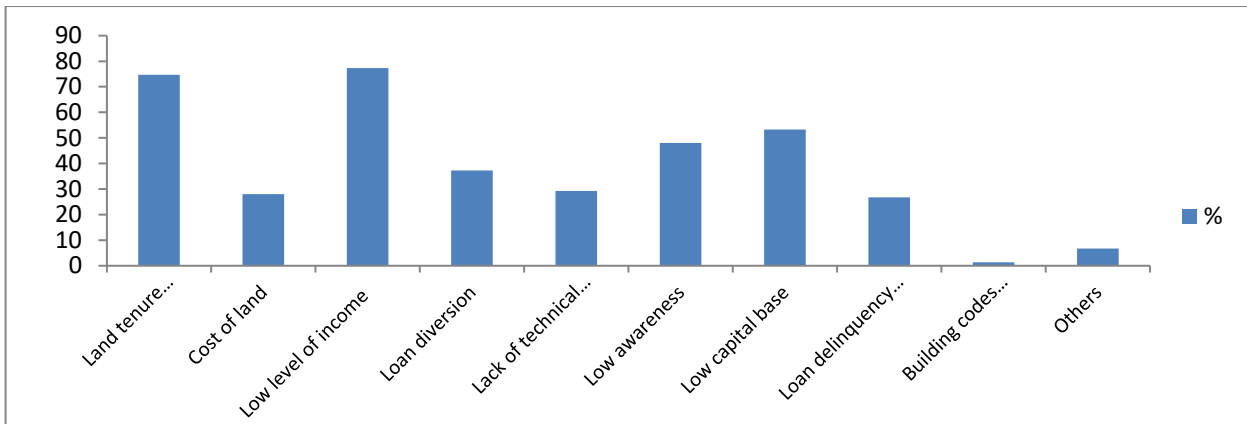


Figure 5. Constraints of Housing Credit Delivery. Source: Fieldwork, 2019

Loan diversion (37.3%) is another constraint affecting the delivery of credit to incremental housing process. Lack of technical assistance and monitoring also constrained delivery of housing as wastages could be recorded on the credit advanced due to lack of technical expertise in the use of the credits.

In Figure 5, 29.3% of the organisations in the study area affirmed lack of technical assistance and monitoring as affecting the delivery of housing credits. Loan awareness was indicated by 48% of the organisations in the study area. Low capital base that constrained the reach of the credit facility was also indicated by 53.3% in the study area as constraining credit delivery to incrementally built houses of the low and moderate income households.

Credit delinquency rate

In Figure 5, 26.7% of the organisations advancing credits to housing in the study area, alluded to loan delinquent rate as constraining the delivery of credit to many of the households that needed to be reached. Most of the households requesting for the credits build in the informal settlements that are equally termed illegal settlements thus constraining credit granting organisations in giving credit. This factor was mentioned as constraining credit delivery by 1.3% of the organisations in the study area.

Constraint Mitigating Measures

From figure 6; 48% of organisations offering assistance in the study area, claimed to have introduced proof of ownership as substitute to title in granting credit so as to enable many households benefit. This is a need to reduce default has being employed by 82.7% of the organizations. This high proportion shows that it is a common means of guiding against default and discontinuity of the credit facility. Insurance (25.3%) is also used by the organisations where clients or households are encouraged to take up insurance to insure the credit facility so that in time of default the credit providing organisation will be indemnified. This measure is used by 54.7% of the organisations in the study area, in reducing the risks of default. Limiting credit facility to locality and immediate

neighborhood as well as known people accounted for 92% of the organization and are another way most of the organisations protect their investment and reduce default.

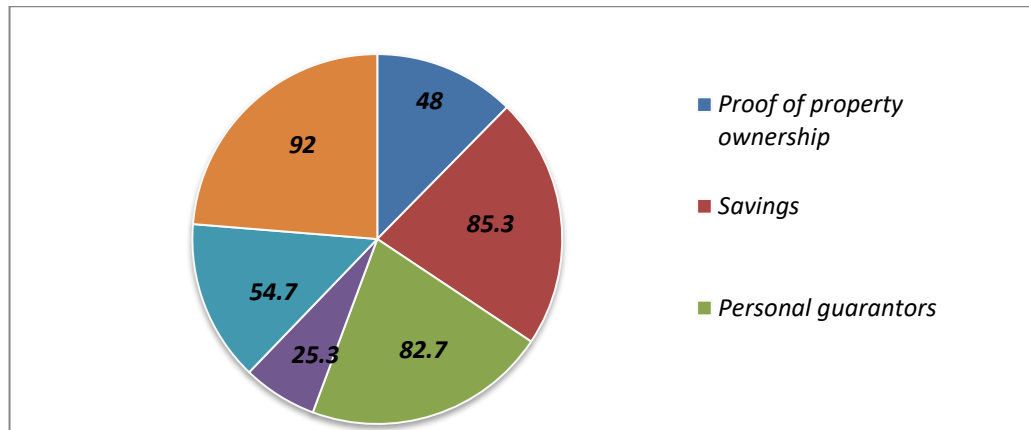


Figure 6. Mitigating Measures to Housing Credit Delivery Constraints.

Source: Author's Fieldwork, 2019

Conclusion

The study considered factors constraining financing mechanisms for incremental housing in informal settlements. It reveals the incremental housing financing of the low and moderate income households as well as the factors constraining the financing mechanisms in developing nations and Nigeria in particular. The study led to the discovery that lack of access to formal housing finance is the prominent factor forcing the low and moderate income earners to embrace incremental housing financing mechanisms. There is need for support and help to make housing affordable to the poor since housing being basic need is not meant for the rich or affluence alone. Lack of access to formal finance is the most prominent factor forcing the poor to embrace incremental housing financing. There is also the need for improvement of income as well as development of a model that has intermediate institutions to give household heads access to formal finance institution. Savings, has been the major source of incremental housing financing, thus, it should be well mobilised from the low and moderate income earners to give impetus to incremental housing financing. The funding for the incremental housing process can greatly be improved if the socio-economic and traditional attributes of the people in the area of mutual support, voluntary assistance, collective giving and community solidarity is promoted and encouraged since it has been found to be a potential way of directing the huge overseas remittances, cash donations and material contributions that are devoid of interest rate and default risks to incremental housing. The use of collateral and security from households such as deposited objects and co-signers in formal sector mortgage credit should be embraced. This ensures that the applicants who may have not fully resolved the legality of their land tenure can re-invest into new loans for families of the same income strata to achieve more. Thus, for the financial inclusion of the poor, the formal financial institutions must refine their understanding of individuals, household and collateral assets of the poor and therefore adopt lending policy process cycle to the incremental way in which the poor build their houses.

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