The Integration of Income Generating Activities into Low Cost Housing Units to Reduce Poverty in Developing Countries

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Abstract: Poverty has been recognized as a phenomenon that is of concern to everybody around the world today, both the rich and the poor. The review of the literature shows that one basic way to reduce poverty is for the various governments to engage people in meaningful and satisfying jobs either by creating the jobs or by empowering the people to be self employed. This study looked at the issue of poverty in the developing countries of the world. It then examined unemployment as one of the causes of poverty and proposes flexibility in physical planning laws, development controls and building codes and regulations in developing countries to allow the integration of income generating activities (with minimal environmental impact) into low income housing. Where such mix uses are not allowed, several studies in urban centres in developing countries have shown that a good proportion of residential units are converted to commercial use without approval from the local planning authorities. The result of an empirical study carried out in Surulere local government area, Lagos, Nigeria shows that 87.9% of households in the area did not seek for approval from local town planning authority before they converted part or the whole of their building for the business they were doing. It is also shown that households involved in home income generating activities in high density areas earn more income than those households not involved and the reverse is the case in the medium residential density area. Hence, this supports the view that people converted part of their houses into commercial use to generate additional income and reduce level of poverty. City planners should now understand that the effectiveness of plans to bring about a city's continued economic viability depends on the correct analysis and interpretation of the social, cultural and economic forces interacting within the city.

Key words: Poverty, low cost housing, city planning, income generating activities, economic forces, support

INTRODUCTION

About 25,000 people die every day of hunger or hunger-related causes according to the United Nations. This is one person every 3 and 1/2 sec. Yet there is plenty of food in the world for everyone. The problem is that hungry people are trapped in severe poverty. They lack the money to buy enough food to nourish themselves. Being constantly malnourished, they become weaker and often sick. This makes them increasingly less able to work which then makes them even poorer and hungrier (UNIDO, 2006).

What is poverty? Poverty has been recognized as a phenomenon that is of concern to everybody around the world today, both the rich and the poor. The poverty condition of the poor makes them helpless and hopeless while the rich do not feel comfortable and safe among the poor. Poverty is the condition of having insufficient resources or income. In its most extreme form, poverty is a lack of basic human needs such as adequate and nutritious food, clothing, housing, clean water and health services. Extreme poverty can cause terrible suffering and death and even modest levels of poverty can prevent people from realizing many of their desires. Dike (2003) expresses the view that the first step in any effort to design and implement poverty alleviation policies is a lucid understanding of the concept of poverty and how it can be measured.

He draws attention to the diverse definitions of poverty. However, Afonja and Ogwumike (2003) submitted that there is no objective definition of poverty and no objective way of measuring how many people are living in poverty. They argue that the number differs greatly according to different plausible definitions. Two related questions that are fundamental to the measuring of poverty are-how many are poor and how poor are they?

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Olayemi (2003) conceives of poverty as a state of both material and non material deprivation and that this general definition masks the complexity of the concept. He points out that the perception of poverty varies between individuals and communities between communities or regions and between urban and rural areas. He further argues that the causes of poverty are multi-dimensional, spanning economic, social, cultural and political factors.

Olayemi (2003) also contends that many approaches have been suggested to reduce poverty in the literature but that they can all be broadly grouped into three those that focus on rapid economic growth; those that focus more broadly on the basic needs of the poor and those that focus on rural development as the appropriate strategy. He cautions, nevertheless that those approaches should not be seen as alternatives but should be constructed as complementary approaches for tackling the wide dimensions of the poverty problem.

Most studies on poverty reduction have actually adopted the one-strategy approach while the complementary approach has been adopted in this study. The link between the provision of social services and the integration of income generating activities into residential housing units is examined. Based on an empirical study of the provision of social services in the study area this study looked at how these services have affected the conduct of small scale income generating activities.

Causes of poverty: Poverty has many causes, some of them very basic. Some experts suggest for instance that the world has too many people too few jobs and not enough food. But such basic causes are quite intractable and not easily eradicated. Primary factors that may lead to poverty include overpopulation, the unequal distribution of resources in the world economy, inability to meet high standards of living and costs of living, inadequate education and employment opportunities, environmental degradation, certain economic and demographic trends and welfare incentives (Corbett, 2005).

The concern in this study is the employment factor as it affects poverty in the developing countries. Whereas, virtually all children in industrialized countries have access to an education, only about 60% of children in sub-Saharan Africa even attend elementary school. Without education, most people cannot find income-generating work especially in the tertiary sector of the economy. In addition, developing countries tend to have few employment opportunities especially for women. Even in developed countries, unemployment rates may be high. High unemployment leads to high levels of poverty. Availability of employment also tends to fluctuate, creating periods of high joblessness. These periods usually coincide with seasonal patterns in economic activities.

Provision of housing as solution to poverty reduction: Housing refers to a permanent shelter for human habitation. Because shelter is necessary to everyone, the problem of providing adequate housing has long been a concern not only of individuals but of governments as well.

Housing is a critical component in the social, economic and health fabric of all nations. No country can claim to have provided adequate housing to the various socio-economic groups that make up its population but especially the poor. Thus, most nations in one form or another continue to place access to affordable housing at the top of their priority lists.

Features of residential income generating activities: Residential income generating activity is defined at the household level as basically small scale in nature and belonging to the informal sector. While the definition of what constitutes small scale /the informal sector as amply observed by Omuta (1986) is controversial, there are certain distinguishing features that set it aside from other large scale activities.

According to the UNCHS (1989) these small scale activities are characterized by few barriers militating against entering into such venture since capital and skill requirements are low. Skills are basically acquired through informal apprenticeship, there is limited access to formal credit and lastly, operation is generally outside official rules and regulations.

Given that the general features of home income generating activities should be small scale in nature, the question which arises is what are the specific features of these activities for their successful integration into housing programmes? The characteristics that readily come to mind are those that prevent the occurrence or minimization of neighbourhood deterioration. In general, for income generating activities to be integrated into housing programmes they should have the following major characteristics: minimal noise level, minimal air pollution level, does not attract much vehicular traffic does not generate excess refuse and does not greatly alter the visual/aesthetic quality of the neighbourhood (Elemide and Arimah, 1990).

Reasons for residential income generating activities: One way to empower the people is by creating employments that can give them income. A strategy that can be employed to create employment for the poor is through the integration of small scale income generating activities into low cost housing.

In an ideal setting the home should be separated from the workplace, however this might not be possible in some developing countries of the world. The harsh economic environment and poverty in such countries will

make the argument for the integration of employment/ income generating components into housing programmes a tenable one.

Integration of income generating components into housing programmes is also important when viewed from the perspective of the peculiar institutional and cultural aspects of cities in the developing countries. For instance, the house in developing countries is also the place of work as residents are either partly or fully engaged in economic activities (Egunjobi, 1990). Also, while unemployment figures are hard to come by there are indications that cities in third world countries are being characterized by unemployment and underemployment. It is believed that the successful inclusion of employment/income generating components into housing programmes will go a long way in increasing employment among the urban poor and thus reduce the level of poverty in developing countries.

The purpose of this study is to examine how income generating components can be successfully integrated into low cost housing programmes to have minimal negative impact on the environment and reduce unemployment/underemployment and poverty level in the developing countries. The integration of employment generating activities within shelter programme can be seen as a panacea to the twin problem of providing both adequate shelter and reducing poverty among the low income groups. This is in view of the World Bank's observation that the inclusion of employment-generating components has not been encouraging. These components are difficult to formulate and it may be sometime before significant result can be observed (World Bank, 1980a, b).

Relevant theories and concepts: There are various theories, concepts and strategies of urban and regional development that looked at employment opportunities, service and infrastructure provision and human settlements. Also there are conceptual underpinnings behind physical plans and regulations that are used to guide and control development and economic activities within the society. Some of these are reviewed here as they help to provide understanding to the relationship between service provision, employment creation and human settlement.

The concept of positive discrimination: Positive discrimination refers to the allocation or redistribution of resources in favour of disadvantaged territories, regions and neighbourhoods (Coates *et al.*, 1977; Knox, 1982).

The growth pole theory: The growth pole strategy in regional development can be conceptualized as a form of positive discrimination. Coates *et al.* (1977) observe that the general aim of the growth pole strategy is to stimulate (or even create) medium-sized centres in disadvantaged regions in order that they become self-sustaining centres of industrial and service growth.

The strategy of development from below: Is a strategy that sees positive association between service provision and income-generating activities. Development from below is a strategy that focuses on settlements at the bottom of the settlement hierarchy.

This makes it different from the growth pole strategy which is alternatively referred to as development from above and which focuses on settlements at the top of the settlement hierarchy. But both strategies have in common some emphasis on service provision as a means of improving the economic and physical environment. Development from below is designed to control the backwash effect of development from above and to create development impulses within less developed settlements or areas. This can be achieved by attracting or reactivating income-generating activities in such places (Okafor, 1990).

Comprehensive planning: The comprehensive plan is the basic city planning document and is the guide to making daily development decisions in terms of their long range consequences. The plan receives its day to day expression in a series of legal documents-zoning ordinances, subdivision regulations and building and housing codes that establish standards of land use and quality of construction.

Development controls: Development control refers to the allocation of land and the coordination of human activities by means of zoning ordinances and subdivision regulations. A zoning ordinance governs how the land in a zone or district of the city may be used and the size, type and number of structures that may be built on the land. The zoning regulations carry out the land allocations recommended in the comprehensive plan. Other regulations provide general standards with considerable flexibility in the mixture of building uses or the building design. These require more extensive review before approval.

Building and housing codes: Building and housing codes govern the quality and safety of construction of new buildings as well as subsequent maintenance. In most instances, the codes specify the materials to be used, their minimum quality and the building components necessary in a structure that is suitable for human occupancy.

Literature review

Measuring poverty: In statistics kept by the United Nations (UN), the measure of a country's wealth is generally based on its Gross Domestic Product (GDP). For the purposes of figuring poverty levels, GDP figures are usually calculated as GDP (sometimes referred to as income) per capita. Levels of poverty also depend on how income and resources are distributed. Countries with high GDPs can have low levels of poverty if people have relatively equal amounts of income and resources such as in Scandinavia. On the other hand, countries with equally high GDPs will have higher poverty rates if a few people have far more income and resources than the rest. The United States is such a country.

Several other options exist in addition to definitions of poverty based on GDP per capita or on threshold income. Some developed countries such as most nations of the European Union, define poverty as having significantly fewer resources than average, generally less than half of typical earnings or income. This definition bases the poverty figure on mean (average) or median (the middle) income.

Another measure of poverty defines it in terms of human capital-that is a person's earning potential (generally related to work skills). From this perspective, people with relatively high earning potentials are not poor because they should be able to easily find work.

While income and skills can be measured fairly easily, other definitions of poverty are based on more subjective concepts. A basic subjective definition of poverty is that people are poor if they believe they do not have enough resources.

Causes of poverty in Africa: Throughout the developing world, ethnic and racial minorities experience prejudice from majority groups and have difficulty attaining an average standard of living. For example, under the system of apartheid, enforced in South Africa from 1948 to the early 1990s, the government systematically denied rights, fair treatment and educational and employment opportunities to nonwhites, leaving them in massive poverty. During the late 20th century, desertification contributed to famines in a number of African nations, including Somalia, Ethiopia and Mali. Political instability and wars in many sub-Saharan countries have also contributed to poverty. As a result of such factors, the number of people living in extreme poverty in sub-Saharan Africa grew from 217 million in 1987 to >300 million in 1998.

Housing problem as contributing factor to poverty: In the 1970s, some developing nations turned to self-help housing to solve problem of housing and poverty in their countries. The Zambian government, for example gave families plots of land and building materials such as cinder blocks, cement and corrugated tin to construct or improve their own shelters.

This housing approach is popularly referred to as a site and service program and has been implemented on a large scale in India, several South American countries and most of Africa south of the Sahara. Numerous non-governmental organizations assist in housing development and in upgrading housing standards in developing countries. Some include the United Nations Center for Human Settlements (UNCHS) and the International Bank for Reconstruction and Development (IBRD).

In Russia, preliminary results of the Let's Put Monopolists on the Meter action conducted in Russia's regions by the Russian Democratic Party YABLOKO have demonstrated that the envisaged increase in housing and utilities tariffs will deepen the poverty of many Russian citizens. The Party observed that about 34 million Russian citizens live below the poverty line, i.e., have an income lower than the subsistence minimum.

The final goal of the YABLOKO project is to create a constructive model of housing and utilities reform based on the principles of social justice, civil control, competition, demonopolisation and the fostering of small business.

Britain and much of Western Europe grappled with suburbanization and the decentralization of cities. In the former USSR and in Eastern Europe demand for more private dwelling space has increased. In the Third World, raw housing demand is still largely unmet as more people move to the overcrowded cities. The shanty towns built by these migrants on the outskirts of many cities often have no electricity, running water or sewage systems.

Housing and socio economic planning: During the Great Depression of the 1930s regional and national governments around the world intervened more forcefully in city planning. To foster economic development in depressed regions, the United Kingdom authorized the appointment of special commissioners with wide ranging powers. Britain, France, the Netherlands and other European countries carried out extensive public housing projects.

Though contemporary city planning continues to focus on physical design of the environment but the city's economic development and redevelopment also fall within the scope of city planning. Economic development plans make use of a mixture of incentives, technical assistance and marketing to create jobs, establish new industry and business, help existing enterprises to flourish, rehabilitate what is salvageable and redevelop what cannot be saved.

City planners now understand that regional, interregional, national and international economic forces affect a city. They also realize that the effectiveness of plans to bring about a city's continued economic viability depends on the correct analysis and interpretation of these forces.

These are the lessons of the shifts in suburban, non metropolitan and interregional economic patterns that took place in the 1960s and 1970s. It is the task of city planning to minimize the impact that changing cycles have on the city's residents and businesses.

Onibokun (1990) reported that poverty due mainly to poor income-generating base is a major cause of environmental squalor in developing countries. He therefore recognized the need to integrate employment opportunities with the human settlements and to improve the economic base of the settlements in order to achieve the following objectives: alleviate the poverty, improve the earning capacity of the people, improve the skill and technical ability of the people, raise affordability level of people for services, amenities, housing etc., and improve quality of life in general.

Okafor (1990) observed that the knowledge of the type and scale of different income-generating activities is important in determining the activities that can be viable in particular places. Such an insight should be the basis for deciding which employment and income-generating activities to incorporate into programmes of human settlement development.

Entrepreneurship and self-empowerment of the poor: Tempelman (2000) identified that many African women undertake income-generating activities in order to sustain their families and have some private income but that too often, these activities provide only a small income. She also identified that illiteracy and lack of basic business management skills are part of the reason why many economic activities fail.

It is in response to the above mentioned problem that the FAO Regional Office for Africa produced training packages for adults in numeracy and simple bookkeeping during the first half of the nineties in some African countries.

The Rural Enterprises Development Support (REDS) project operated in three regions of Ghana including the Volta region, since 2002.

In each region, a UN Volunteer works with a local counterpart to provide training in entrepreneurship skills, assistance in improving product quality and help in accessing appropriate technologies for increased

levels of production. An important additional task is to facilitate access to financial services in the region (UNIDO, 2006).

The team in the Rural Income Generating Activities (RIGA) project which is a collaborative effort between the Food and Agriculture Organization of the United Nations, the World Bank and the American University, Washington DC, notes that as part of their survival strategies, poor rural households work not only in agriculture but also in a myriad of manufacturing and service activities.

The Rural Non Farm (RNF) economy is an important source of income for rural families. Early studies have shown that the relative importance of this sector in the rural economy (20-60% of rural income) actually increases with development.

It is therefore useful, when thinking about rural development to consider the full range of Rural Income Generating Activities (RIGA) carried out by rural households in a manner that facilitates rural poverty alleviation.

The study area: This study is carried out in a selected area within Surulere local government area in Lagos state, Nigeria. The local government area is part of the metropolitan area of the state. Surulere local government area became recognized as a place for re-settlement of people that were moved from Lagos Island during the renewal of that place.

As such a good part of the local government area consists of public housing estates constructed by the Lagos State Development and Property Corporation (LSDPC) and leased or sold to the public.

These are in addition to privately owned housing units in the area. High and medium density residential areas can be identified within the local government area. It is this mixture of housing types and densities that informed the choice of the local government area as well as the selected area within the local government area.

Apart from the residential land use there are other landuses for transportation, commercial, recreational, industrial etc., within Surulere local government area. The main arterial roads within the local government area are the Funsho Williams Avenue and the Apapa-Oshodi Express road.

There are important distributor roads that pass through areas that have virtually been converted from residential to commercial use. Such roads are the Adeniran Ogunsanya road, Alhaji Masha road, Ogunlana Drive, Lawanson/Itire road (Fig. 1 for the
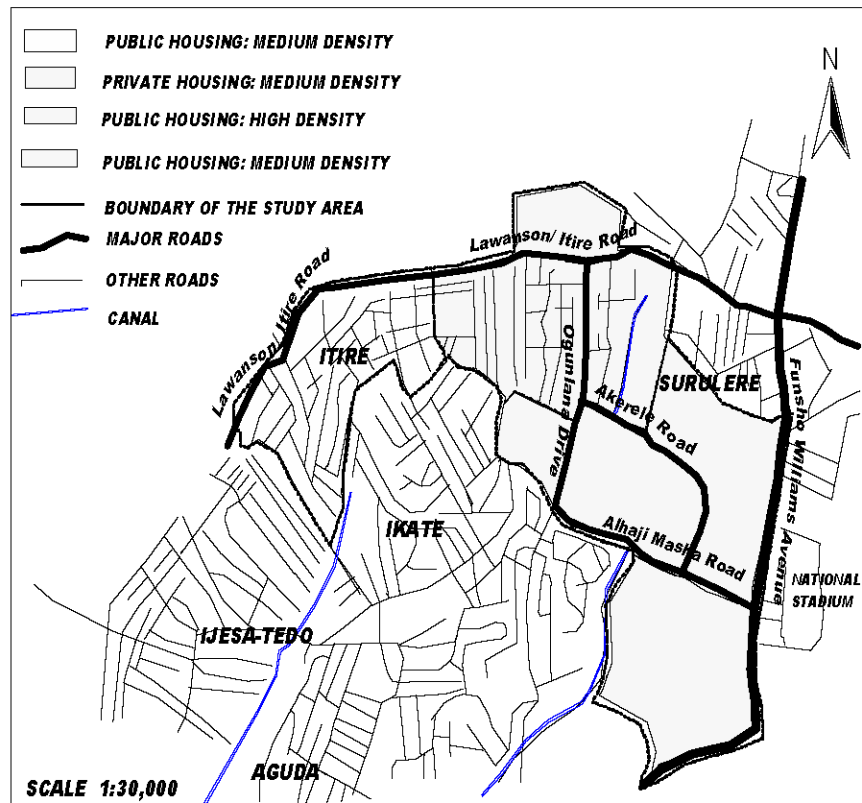
Fig. 1: Map of Surulere local government area, Logos showing the selected public and private housing areas; WABP street map of Lagos, 2004

location of these main roads). In addition to high concentration of commercial activities like banks, eateries, boutiques, etc., along the arterial and distributor roads mentioned above there are designated market places within the local government area. For recreation, there are two standard stadia in addition to sporting and recreational facilities owned by some secondary schools and corporate organizations. There is the Iganmu industrial estate containing a brewery, a paper mill etc., within the local government area.

Sampling procedure and questionnaire administration: The area within Surulere local government area selected for this study has been chosen to cover the medium and high density residential areas and also to cover the public and private housing units type. The selected area for this study is shown in Fig. 1. All the eighty seven streets in the study area were identified. Prior field observations have shown that commercial activities are more concentrated along Funsho Williams Avenue and the major distributor roads in the selected part of Surulere local government area. All these roads are included in the study. Apart from the major roads mentioned above the other streets have been chosen according to their residential density type (high or medium) and housing

Table 1: Distribution of questionnaires in the study area

Major roads/ categorized areas	No. of roads	No. of questionnaires retrieved
Public housing, high density area	33	416
Public housing, medium density area	11	75
Private housing, high density area	22	278
Private housing, medium density area	21	163
Total	87	932

ownership type (private or public). This distribution is shown in Table 1. All the houses on each street were identified and numbered. Houses involved in the study were selected randomly using the Table 1 of random numbers. Selected houses per street vary between three and twenty depending on the number of houses on the street. All the household heads were interviewed in each of the selected houses.

A total of 1,000 questionnaires were produced and distributed to head of households in the study area and 932 questionnaires were retrieved and analysed.

Facilities available in the study area: Surulere as mentioned earlier was originally a purely residential area but of recent a lot of residential buildings have been

partly or wholly converted to commercial use. An examination of the sources of water used by residents of Surulere local government show that many of the households make use of water for domestic and other uses from more than one source. About 78.6% of the households interviewed make use of piped water from the public water supply. About 24% make use of borehole and 12.5% use rain water. Another 43.8% use water from the well, 75.1% buy the water they use from water vendors while 11.3% of the respondents make use of processed/bottled water.

On the quantity of water often used, the respondents were asked to estimate the water they use in buckets (8 L is the estimate for one bucket). This is because the residents are used to getting the water they use from the tap, well, water vendors etc., in buckets. About 4.9% of the respondent could not give the estimate of the amount of water they use. However 43.3% of those interviewed said they often use <6 buckets of water a day while 35.3% said they use between 6 and 10 buckets a day. About 14.4% of all the house holds interviewed said they use between 10 and 14 buckets of water in a day and another 2.1% of all households interviewed said they use >14 buckets of water in a day.

The supply of electricity from the public corporation in charge of electricity is not currently very regular in Nigeria. When the respondents were asked for the sources of their electricity supply, 53.6% said the only source is from the Power Holding Company of Nigeria (PHCN), the public corporation in charge of electricity supply. The remaining 46.4% of the household said they use the PHCN source as well as their private power generating set.

With respect to the duration of supply of electricity from Power Holding Company of Nigeria (PHCN), 4.1% of the household interviewed could not respond to the question. About 39.9% of the household said they receive electricity supply for <4 h in a day. Another 39.6% said they receive electric power for between 4 and 8 h in a day and 15.1% said they receive electricity power for between 8 and 12 h.

The question on the method of solid waste disposal reveals that some of the house holds make use of more than one method of disposing their waste. About 34.5% make use of the cart pushers, 2.5% of the households said they use private incinerators and 76.5% said they patronize truck services provided by the Private Sector Participation (PSP) in waste disposal. About 1.3% of the respondents did not answer the question on the method used to dispose their waste.

On the condition of the road leading to their houses, 2.1% of the households said the roads are excellent while 14.2% said the condition of the roads leading to their houses is good and 46.3% said the roads are fair while 37.4% said the condition of the roads are poor.

Characteristics of the buildings occupied by households in the study area: As mentioned earlier the study area can be distinguished into public and private housing areas and each one of these can be distinguished into high and medium residential densities. Field observations in the study area show disparity in the environment, housing types and characteristics of the people in high and medium densities residential areas. The discussion of the characteristics of the buildings in the study area will be along this line.

Table 2 shows the distribution of households in the buildings, their sizes as well as the number of income generating activities inside and around the buildings. One can see the disparity in the characteristics of the high and medium density residential areas. For example while 19.1% of the buildings in the high density area have between 5-7 households per building only 8.8% of the buildings in the medium density area have this same occupancy rate. Also the distribution of household size shows that household sizes in the high density areas are larger than in the medium density area. For example 39.1% of households in high density area and 22.2% in medium density area have between 6 and 8 members in their households.

The income generating activities identified in and around the buildings in the study area can be distinguished into two. There are those operated by people not residing within the building and those operated by people residing within the building. The concern in this study is the later type. The thrust of this is to examine the extent to which people have been able to create jobs and work at home.

Profile of the head of households: Table 3 shows the socio economic characteristics of the head of households

Table 2: Number of households and income generating activities in the buildings in the study area

No. of households in building	High density	Medium density
1	3.2	19.7
2-4	74.3	69.4
5-7%	19.1	8.8
Above 7%	3.4	2.1
Household size		
1-2%	12.3	17.1
3-5%	43.5	58.3
6-8%	39.1	22.2
Above 9%	5.1	2.4
Number of income generating activities in the building		
1%	36.4	60.3
2%	33.1	29.4
3%	19.6	4.4
4%	4.5	5.2
5%	4.1	0.7
Above 5	2.3	Nil

Table 3: Socio economic characteristics of the head of households

Characteristics of head of household	Percentage of head of household in the category (%)
Gender	
Male	98.4
Female	1.6
Age (years)	
Below 20	1.2
20-30	30.7
31-40	42.1
41-50	12.6
51-60	10.3
Above 60	3.1
Level of education	
No formal education	9.3
Primary school level	12.5
Secondary school level	45.4
Tertiary education	19.1
Professionals	12.4
Others e.g., Arabic school	1.3
Occupation	
Unemployed	1.6
Student	1.4
Private business	69.3
Civil/Public servant	21.5
Others	6.2
Type of apartment occupied in the house	
Room(s)	75.1
Flat/Self contained apartment	21.2
Duplex	0.4
Self contained whole house	3.3

interviewed in the study area. Almost all the head of households in the study area are male (98.4%) and a good number of them are in the working class group and are between 20 and 40 years old (72.8%). The distribution of the head of households according to their level of education shows that 9.3% are not educated in any form while 12.5% have primary school level education and 45.4% read up to secondary school.

The head of households that have gone to higher schools/colleges form 19.1% of the total respondents while 12.4% have qualifications from some professional bodies. The last group is consists of those head of households that have other type of education like the Arabic school certificate and they are 1.3% of the total respondents.

Categorising the head of house holds in the study area according to their occupation shows that majority are into private business (69.3%) and 21.5% of the head of households interviewed are public or civil servants.

The distribution of the head of households according to the type of apartment they occupy in their houses shows that 75.1% have one or more rooms they live in. Those that live in flats and self contained apartment are 21.2% (Table 3).

Distribution of average monthly income from all sources for the households interviewed: This study centres on income generation in homes to reduce the level of poverty and how this can be done with minimal impact on the environment. Thus this section gave us information at the level of income of the households in Surulere local government area.

The total monthly income of those households that have one or more income generating activities incorporated into their homes is compared with those that are not involved in home income generating activities. However, income level is usually associated with residential density type. High income households are usually associated with low density residential area while low income households are usually found in high density area. It is on this basis that the comparison of incomes will be done separately for the high and the medium density residential areas.

Table 4 shows the distribution of the average monthly income of households from all sources. The average monthly income rather than the annual income has been used here to make it easier for the respondents to be able to recollect the amount. For a good number of people that are into small scale businesses do not often keep records.

In the high density residential area 40.3% of the households that are involved in income generating activities earn between N20,000 and N80,000 in a month while 27.8% of those house holds that are not involved earn the same amount.

In the medium residential density area 38.1% of households involved in home income generating activities earn between N20,000 and N80,000 in a month and 44.9% of those that are not involved in home income generating activities earn that amount in a month.

In essence this distribution shows that the households involved in income generating activities in high density areas earn more income than those households not involved and the reverse is the case in the medium residential density area.

An examination of the difference in the average income of those household involved and those not involved in home income generating activities in the study area: Following from the above result we are going to test an hypothesis to see if there is actually a significant difference between total income of those households that are involved in home income generating activities and those households that are not involved. The students t-test is used to test the hypothesis for the households in the high density residential areas and those in the medium density residential areas. The result of the test is shown in Table 5.

Table 4: Distribution of average monthly income from all sources of the households involved and those not involved in home income generating activities

Income categories	Involvement of households in home income generating activities: High density residential area		Involvement of households in home income generating activities: Medium density residential area	
	Percentage of those involved	Percentage of those not involved	Percentage of those involved	Percentage of those not involved
No response	3.2	5.6	4.8	-
Below N5,000	1.6	11.1	-	4.1
N5,001-N10,000	9.7	16.7	11.9	12.2
N10,001-N20,000	35.5	38.9	35.7	30.6
N20,001-N40,000	30.6	22.2	31.0	32.7
N40,000-N80,000	9.7	5.6	7.1	12.2
N80,001-N160,000	7.3	-	4.8	6.1
N160,000-N320,000	1.6	-	2.4	2.0
Above N320,000	0.8	-	2.4	-
Total	100.0	100.0	100.0	100.0

Table 5: The result of test of difference in income of those household involved and those not involved in home income generating activities

Test statistics	High density	Medium density
t-value	2.369*	-0.291
Degrees of freedom	140.000	89.000

*Significant at 0.05 level

Table 6: Proportion of households that are involved in home income generating activities

Residential density	Involvement in home income generating activities		Total percentage
	Involved (%)	Not involved (%)	
High density	496 (53.2)	72 (7.7)	568 (60.9%)
Medium density	168 (18.0)	196 (21.0)	364 (39.0%)
Total	664 (71.2)	268 (28.7)	932.000

The t-value of the test of difference in income between those involved and those not involved in home income generating activities in high density residential area is significant at 5% level hence we conclude that the observed difference in income is not by chance and is significant.

However, the t-value of the test of difference in income between those involved and those not involved in home income generating activities in medium density residential area is not significant at 5% level. Therefore it concluded that the difference is not significant or that there is no difference in average monthly income of those households involved in income generating activities and those that are not involved.

Nature and characteristics of home income generating activities in the study area

Households involvement in home income generating activities: About 932 households were interviewed and 60.9% of these are living in high density residential area and 39.1% are living in medium density residential area. The households involved in home income generating activities are 71.2% of all respondents. It is shown in Table 6.

The operation of home income generating activities is not always by head of households. In some cases the wives or children are the operators however, the income from such a business is counted as part of the total income of the household. The survey shows that 45.1% of home income generating activities are operated by head

of households and 54.9% are by other members of the household. During the field observation before the actual survey it was discovered that some of the households have more than one home income generating activities. The distribution of the number of income generating activities owned by one household shows that 85.3% of the interviewed households have one, 11.3% have two and 3.4% have three income generating activities.

An examination of the amount used by households to establish and the average monthly income from home income generating activities in the study area: Businesses are often expected to yield profit that are proportional to the capital outlay at the outset and according to the risk involved in the business.

However, this is not often true especially for small scale businesses. A close study of some of these small scale businesses will show that some of them established with small amount of money and requiring little equipment often yield higher profit. For example small scale food processing outfits can yield profit that is half the cost of raw materials used.

The distribution of those households which are into home income generating activities in the study area according to the amount they use to establish their business and the average monthly income is shown in Table 7. About 7% of households involved in home

Table 7: Amount used by households to establish and the average monthly income from home income generating activities in the study area

Categories of amount used to establish income generating activities	Percentage of households (%)	Categories of monthly income from income generating activities	Percentage of households (%)
No response	2.4	No response	6.2
<N10,000	6.9	Below N5,000	2.3
N10,000-N20,000	23.6	N5,000-N10,000	12.5
N20,001-N40,000	30.1	N10,001-N20,000	22.1
N40,001-N80,000	18.8	N20,000-N40,000	32.2
N 80,001-N160,000	10.4	N40,000-N80,000	19.8
N 160,001-N320,000	4.2	N80,001-N160,000	3.5
N 320,001-N 640, 000	3.6	Above N160,000	1.4
Above N640,000	Nil	-	-

income generating activities used less than ten thousand Naira (N10,000) to start their business while 3.6% used between N320,000 and N640,000 to start their business. About 53.7% of the households used between N10,000 and N40,000 to establish their own home business. Also 54.3% of the households earn between N10,000 and N40,000 as average monthly income from their home business.

We also try to establish if there is a relationship between the amount used to establish the business and the average monthly income derived from the income generating activity. An hypothesis is stated thus that there is no relationship between the amount used to establish home income generating activity and the average monthly income derive from the activity. The correlation analysis is used to examine the nature of the relationship between amount used to establish and the average monthly income. The Pearson's product moment correlation coefficient computed with the SPSS computer software is 0.66 and is significant at 0.01 level of significance. Thus we accept that the more the amount used to establish income generating activity at home the more the income/profit derived from such activity.

Sources of funds for establishing the home income generating activity: On enquiry about the sources of the funds they used to establish their home income generating activities 68.4% of the household that are involved said they used loan from a cooperative society or a bank. About 21.3% said the money they used is donations from relatives and friends, 34.6% said it is from their personal savings. The remaining households said the money is from other sources like money/property bequeathed to them from late relatives/inheritance.

Reason(s) for the home income generating activity: We are also interested in finding out the reasons why people in the study area go into home income generating activities. Some of the respondents actually have more than one reason. Majority of them (97.4%) said it is to earn either the main income or an additional income for

them. Some of them said it is an avenue for them to invest loan obtained from a cooperative society or a bank (43.5%), another 4.3% said they establish the home business to perfected the skill they acquired from a workshop/training they have attended. About 12.4% gave the reason that the business is to keep them busy and engaged especially some of the respondents that have retired from some other employments and 14.2% of the respondents gave some other reasons.

Nature/type of home income generating activities within the house/compound in the study area: The type of income generating activities in the study area are categorized into primary sector, secondary sector and tertiary sector. Those in the primary sector are mainly small scale agriculture-animal production, the backyard type that include poultry, fish farming, piggery etc. About 5.8% of households involve in home business are into this type of business. The probable reason for the low percentage of this group is because the study area is highly urbanized and the buildings do not often have enough space around them. The secondary sector type includes small scale production of things like soap, candle, body cream etc. and they form 23.1% of all households that are into home business. The third category is the tertiary sector and this include all type of services ranging from banks, film companies, supermarkets, cybercafes to car wash service, hairdresser, tyre vulcaniser, etc. About 89.4% of households into home business are in this category.

Part of the residential building used for income generating activities: The nature of home income generating activity will determine its location within or outside the building. During the survey we asked the head of households that are into business, the part of the building they use for their home business. Majority use the front part of the building (67.3%), 23.4% of the households use the back of their building, 45.6% use some rooms inside the building including the garage and 2.3% use the whole building.

Facilities needed to improve the income generating activity in the home: To run some small scale businesses conveniently at home some facilities are usually needed. The survey of the households that are into home business in the study area shows that 32.4% of the households said they need clean water source to improve their business and 93.5% said they need improvement in the supply of electricity while 11.4% said they need accessible roads to improve their business.

Approval for the income generating activity from the local planning authority: As mentioned earlier most of the buildings in the study area were originally built either by the government or by private individuals for residential use. However, currently a good number of the houses have been converted to commercial and other uses. When the households involved in home business in the area were asked whether they seek for approval from local town planning authority before they converted part or the whole of their building for the business they were doing 87.9% said no and 1.7% said yes and 10.4% did not respond to the question.

Perception of the households on the negative effect of income generating activities on the environment: The issue of integrating income generating activities into the home can be viewed from two perspectives. One can view it from the perspective that it will increase the level of income of residents and thus reduce poverty especially in the developing countries. On the other hand one can see income generating activities within the homes as constituting nuisance in the homes and the environment. Likely negative effects of home businesses on the environment were identified and all the household heads interviewed were asked to rank highest one of these negative factors. The percentage distribution of the households according to the ranking of the factors is shown in Table 8.

Larger proportion of the households ranked noise and air pollution first as negative factors resulting from home income generating activities. About 37.1% of the households in the study area ranked noise first.

Table 8: Ranking by households of negative factors of home income generating activities on the environment

Negative factors of home business	Percentage of households ranking factor first (%)
Noise	37.1
Air pollution	32.8
Water pollution	8.3
Land degradation	1.4
Traffic congestion	9.3
Congestion in and around the home	8.0
Impairment to aesthetic quality of the neighbourhood	0.7
Others	2.4

While 32.8% of the households ranked air pollution first as a negative factor affecting the environment as a result of home businesses. The noise and air pollution result mainly from the use of electricity power generating set by a good number of businesses during power outages by the publicly owned electricity company and this is quite often in the study area.

Water pollution, traffic congestion and congestion around the home were next in importance as negative factors resulting from home income generating activities and affecting the environment.

Suggested solutions to minimizing the negative effect of home income generating activities on the immediate environment: Home income generating activities are the day's reality that has come to stay with us in the society. Even where they are going to be phased out it must be gradual. The immediate solution should be how to minimized their negative impact on the environment. Thus when the households in the study area were asked on how to minimized the impact of home income generating activities 87.5% said this could be achieved trough improvement in public facilities provision especially electricity supply. The present irregular nature of electricity supply in Nigeria usually force a lot of households to buy private electric power generating set to complement the supply from the public company. Home income generating activities that are dependent on use of electricity simply aggravate the pollution from these power generating sets. Another 34.6% of the households interviewed said the regulatory activities of the local town planning and environmental protection authorities could curb the excesses of home integrated income generating activities and thus minimized their impact on the environment. About 53.1% of the households interviewed said the negative impact of the integrated home income generating activities could be reduced by educating those that are involved in home business and the public at large on the need to keep the environment clean and safe.

CONCLUSION

One can easily argue that income generating activities should not be allowed within residential areas because of its devastating effect on the environment. However, as shown in this study if income generating activities are disallowed within residential areas through legislation and regulations by the authority people are bound to disobey such regulations. This study has shown that 87.9% of households in the study area did not seek for approval from local town planning authority before they converted part or the whole of their building

for the business they were doing. Also people earn either their main income or additional income through businesses that are sited in their homes. Households that are involved in home businesses have higher incomes than those that are not involved; in high density residential areas. Larger proportion of households are actually involved in home income generating activities. From the findings in this study the government in Nigeria and other developing countries can actually reduce the impact of noise and air pollution from electricity generating set used by home businesses by improving the supply of electricity from public the source. Hence from the foregoing, we think the government in the developing countries should research on how to integrate and minimise the effect of income generating activities in residential areas on the environment and thereby transform the socio-economic base of the settlements and improve the standard of living of the people.

RECOMMENDATIONS

It is shown in this study that in the high density areas households involved in home businesses earn more income than those households not involved. Hence to improve the standard of living of the people and reduce the level of poverty in the high density areas, it is recommended that income generating activities should be allowed in high density residential areas. This is in view of the large proportion of households that are involved. In the study area 71.2% of all households have one home business or the other either operated by the head of the household or by other members of the household. However such income generating activities must get the approval of the local planning authority that is to make sure that home businesses approved are not detrimental to the environment.

As large number of households are involved and those that are involved earn more average income than those that are not involved in home businesses, it is recommended that the facilities that are crucial to and that will enhance income generating activities within residential areas should be improved. The presence of basic facilities such as water and electricity supply, access roads and waste disposal can be regarded as providing opportunities for the sustenance of residential income generating activities.

Very large number of home income generating activities require electricity at one stage or the other. However, this study shows that 79.5% of the households receive electricity supply for <8 h in a day. This hours of electricity will not sustain a good number of small scale businesses. This is why a good number of the households (46.4%) use electricity generator to complement the public supply. Improved public supply of electricity will also reduce the level of noise and air pollution from private electricity generators that are associated with the activities of home businesses in the study area as suggested by the interviewed households.

The town planning authority should be people oriented and friendly such that the people should see the town planners as part of them rather than as government officials that are out for them. It is clear that in Surulere, Lagos people do not go to the local planning office to seek approval for converting their buildings, 87.9% of all households that have home businesses said they do not seek approval from the local town planning authority before converting part or the whole of their building for business.

The local planning authority should focus more on and regulate home businesses that are fronting the streets so that they do not impair the aesthetics of the environment. About 67.3% of home businesses in the study area make use of the front part of the buildings in which they are located.

The environmental regulatory authorities should use persuasive methods to direct the developmental activities of the public. This can be through public enlightenment programmes using the mass media. There should be organized constant meetings with the public to increase the level of citizenship participation in planning.

In developing countries generally the local town planning authority should provide development controls and building regulations with considerable flexibility in the mixture of building uses or the building design to allow for the integration of income generating activities with minimal environmental impact into residential buildings. These may however require more extensive review before approval.

As shown in this study most of the households that practice home business are in the high density residential areas and that they earn more income than those households that do not practice home business. The future government low cost public housing projects can be designed to suitably accommodate the integration of income generating activities in the houses such that the impact on the environment will be minimized.

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