

Article

Livelihood Strategies and Their Determinants among Informal Households in Calabar, Nigeria

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Abstract: The purpose of investigating livelihood strategies is to seek patterns that can be acted upon in order to improve livelihood prospects. This paper assesses household livelihood strategies and their determinates by asking (1) how urban households manage and mobilise resources and (2) how they combine assets—emphasising the existing strategies they adopt and their outcomes. Using a mixed-method cross-sectional design, four informal settlements were surveyed. Household questionnaires were developed and used to collect data from 425 households in Calabar, Nigeria. A total of 45 interviews, non-participant observation, and 2 focus groups were conducted. Quantitative data were analysed using the Statistical Package for Social Science (SPSS version 26, IBM, Armonk, NY, USA) and presented using tables. The qualitative data were collected, coded and analysed using NVivo 1.2 (QRS International). Fundamental context-related livelihood strategies in asset building are identified, and the diverse approaches and constraints that emerged are analysed. The result shows that households diversify their assets with strategies which are complex and diverse. This ranges from the extension of spaces and sub-letting a room to reducing their expenses (by spending less), borrowing from friends and relatives, and seeking help from community organisations. Others include pawning their belongings, engaging in home-based enterprises, and investing in children's education, migration, and urban agriculture. Findings further indicate the ability of households to avoid or reduce their vulnerability and to increase their productivity depends on their initial assets and on their ability to transform them into income, food, or other necessities. This paper recommends ways of strengthening and supporting households' strategies to cope with and reduce housing vulnerability.

Keywords: capital asset; livelihood; diversification; strategies; Nigeria



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1. Introduction

Housing problems and inadequate housing conditions increase household vulnerability in developing countries [1–3]. The rising urbanisation and the volatility of the economy continued to impose substantial welfare costs on households in the face of future uncertainty, shocks [4–6], and unemployment [7,8]. The increase in urbanisation is intertwined with the existential challenges the world has faced in the last five decades [9]. For example, in Nigeria, the impacts of the economic crisis included the recession and the slump in oil, minerals, and agricultural products. This led to less income and economic activity, declining returns to labour, and lower productivity in the urban areas [10]. In addition, jobs and income have become precarious, common property resources are declining, and spending on household commodities, fuel, and water is decreasing [11], creating conditions of disadvantage that constrain the urban poor from the benefit of sustainable urbanisation [12].

Many urban households are under pressure from persistent changes to the institutional and socioeconomic systems [13–15], including long-term stresses such as climate change and income inequality as well as immediate shocks [16–18]. This propels households to embrace a variety of livelihood strategies to contract a portfolio of livelihood activities

to meet and, if possible, enhance their livelihood outcomes [19–22]. A livelihood is not just a means of survival but also the resources people need to enhance and improve their well-being [23,24]. Livelihood assets are the resources which households draw on to carry out their livelihood strategies [25–27]. At all levels, available assets constitute a stock of capital (human, social, financial, physical, and natural) that can be stored, accumulated, exchanged, or depleted and put to use to generate a flow of income or other benefits (to reduce shocks and stresses) [28,29].

The Department for International Development [30] specifies that no singular category of asset is adequate to yield the various livelihood outcomes which people seek. Thus, they must seek ways to use a combination of different asset capital to survive. Capital is a means by which people can “engage more meaningfully with the world and most importantly, the capability to change the world” [30] (guidance sheets 2.3). It is not just something that goes into the production process: it is the basis for the power to act and ultimately bring about change [31–33]. The level and diversification of assets and capabilities is determined in part by people’s status and entitlements in a particular context [23,34–38]. It protects households against risks from the outside [39] and enables them to adapt when risks cannot be avoided [28]. Diversification may include expenditure-reducing and emergency strategies (how people deploy or exploit existing assets) and the use of the stock of social and physical capital, yet it may be linked with success in achieving livelihood security under improving economic conditions as well as with livelihood stress in deteriorating conditions [40].

In Nigeria, households diversify their resources to overcome consumption shortfalls and to minimise the adversities and failures due to shocks and stress. However, the specific strategy depends on the assets the household is endowed with (for instance, households with access to land will divert some of their labour into other income-generating activities during the rainy season) [20,41]. This offers the potential for more urban livelihood opportunities. Scholars emphasise the concomitant need to promote economic and social sustainability [42,43]. Some argue that development per se contributes to social and economic benefits because it has a direct impact on creating jobs in the construction sector and related industries and on the prospect of growth in the local population, which in turn boosts local demand for goods and services [44].

Several empirical studies have reported on the changing aspects of livelihood strategies in relation to capital assets [20,37,45,46] in different rural contexts [47–51]. Through conceptual debates, these studies have shown how the assets of the poor mediate the way households pursue their livelihood strategies [34,52–55]. However, in Nigeria, little empirical work is available on household livelihood strategies in urban areas. While there is a dearth of studies on quantitative measurement and analysis of livelihood assets, few attempts have been made to assess livelihood strategies in specific scenarios [54,56]. The primary reason for a significant knowledge gap can be attributed to existing social exclusion from the policy processes of these poor settlements. This leads to the central concern and debate about how limited capital and changing patterns of housing vulnerability can mingle with urban poor people’s livelihoods. Therefore, this paper seeks to address this knowledge gap with the aim of assessing household livelihood strategies and their determinants among urban residents in Calabar, Nigeria. The specific research questions are: What are the household livelihood strategies? How successful are their strategies? What are the outcomes? This study draws on research into livelihood systems from four selected informal settlements and proposes policy interventions that could be more helpful in addressing the challenges faced by urban households in the study area. The paper contributes to the wider discussion concerning the association between housing and how this links to the sustainable livelihood debate.

2. Materials and Methods

2.1. Study Area

The study was conducted in Calabar, the capital of Cross River State, formally old Calabar Town and Port. Calabar lies within the limits of latitudes 4°54'00" north and 5°04'00" north and longitudes 8°18'00" east and 8°24'00" east. Calabar is on a low plain with few areas rising to 150 m above sea level. It has an area of 406 km² and a population of about a million. It is a coastal area with a high rainfall associated with tropical rainforest regions. Hence, water is a significant topographical feature. The Mbukpa and Ekurinum communities have direct access to water bodies. Calabar has two distinct seasons: the wet season, usually with long rainy periods that start from early April to early October, and the dry season, which starts from late October to early April. It has many areas with swampy features because of the intensity of rainfall in the area. The elevation in the built-up area ranges from one metre in the south to 65 m in the northern part of the city. The land surface slopes downwards towards the southern part of the Atlantic Ocean. Typical ecological problems such as unchecked constant flooding caused by the tidal flow of the coastal area are common. However, the soil is composed of coastal sand and can support buildings, road infrastructure and other physical developments.

Over the years, Calabar has experienced significant urban population growth. The phenomenal growth is a consequence of many social and economic factors, such as the discovery and processing of crude oil 1960s and the development of industrial and commercial enterprises and the administrative positioning of the city [57]. As the population size continues to increase from year to year, so does the city. This significantly affects the pattern of land use and will affect it directly through the generation of housing demand.

Dependence on federal allocations of finance dictates that local governments can have only a limited range of responsibilities and ways of solving their housing problems. This includes providing infrastructure for low-income households. Inadequate capital assets have significantly contributed to the current rate of underdevelopment in the urban area. In addition, apart from its contribution to spatial restructuring, several projects are located on cheap land, contributing to the proliferation of informal settlements. A third or more of the urban population are migrants without formal housing and hence they have no or limited rights of access to urban services or welfare. This results in a poorly developed environment and a high concentration of residents.

2.2. Informal Economy

In Calabar, certain groups suffer disproportionately from their informal status, particularly migrants, women, and children. Children, for instance, are particularly vulnerable and their mortality rates are exceptionally high in informal settlements. In certain informal settlements child mortality rates are twice as high as the national average. Life expectancy and infant mortality may affect housing demand through their effects on population growth. As expected, countries with low incomes have a low life expectancy. Life expectancy in the Calabar metropolis is low, with a median life expectancy at birth being 50 years for females and 45 years for males (Nigeria Population Commission, 2019).

Regarding employment, poor women are often concentrated in low-wage, low-skilled and home-based jobs in the informal sector. There are significant numbers of people in non-agricultural informal employment. On average, 70 per cent of non-agricultural employment in Calabar is in the informal sector. The proliferation of the informal economy and settlements affects women excessively, not only because they are generally poorer than men are, but also because they "lack decision-making opportunities and experience greater difficulty accessing resources and services tailored to their needs" (Avis, 2016). They also face barriers to accessing health and other services, denying them the advantages associated with urban living.

2.3. Data Collection

The study draws on the findings from a PhD thesis on urban housing and the vulnerability of low-income households in Nigeria's informal settlements submitted to Newcastle University. The study examined several livelihood strategies in which residents of Calabar mobilised to cope with their limited capital assets. The informal settlements covered were Mbukpa, Atimbo, Ekurinum, and Ikot Ansa. This study utilises a mixed method (triangulation) research approach with two phases consisting of a cross-sectional household survey, interviews, focus groups, and non-participant observation, allowing methodological triangulation of both quantitative and qualitative research data. Mixed methods provide a better understanding of the research problems and offset the weakness in the use of either quantitative or qualitative methods alone [58]. By leveraging the strengths of both approaches, results from mixed methods strengthen the robustness of the research and stimulate alternative understandings. It also illuminates the conditions associated with specific outcomes. In terms of specific design, the researcher used the complementary cross-sectional design. With this design, the study began with a quantitative survey in the study area, and after analysing the research result, the researcher proceeded with the collection of qualitative data.

Regarding the sample design, the targeted population was the household heads in the study area. In August 2018 and October 2019, based on the principle of random sampling, questionnaires were designed with 45 closed questions to seek basic information from household heads aged 18 and above living in the study area. The choice of household heads was because they were in a better position to provide information about the research findings. Information on livelihood strategies and opinions on recent trends were collected using open-ended questions. Of the 480 copies of the questionnaire distributed to households, 425 were completed and used for statistical analysis. A total of 45 one-to-one in-depth interviews and 2 focus groups were held with households, government officials, community leaders, private entrepreneurs, and developers to provide detailed information about the more complex issues that could not be addressed during the household survey. This served as a check to ensure that the viewpoints of harder-to-reach groups were included during the study. The household interviews provide a broad and deep understanding of the issues and problems. This was to verify claims and follow up on the issues and questions that emerged during the questionnaire and share experiences and knowledge about their own situation. The data collected focused on repetitive statements, which indicated the ideas that were particularly salient to the respondents.

Focus groups were also arranged with the help of gatekeepers. The data collected from the focus group complemented the data from other sources and facilitated dialogue with other groups. This knowledge later served as a frame of reference during data analysis. In addition to the focus groups, non-participant observation was used to collect data for the research. Observation data also provide a new dimension to the understanding of the study context. This includes the level of facilities and infrastructure services, what facilities they use, how they move around settlements, and other features, such as the local identity of the study area.

2.4. Data Analysis

The quantitative data collected were coded, cleaned, and analysed using Statistical Package for Social Science (SPSS), a comprehensive software package for the statistical analysis of data. A frame of analysis was constructed, including variables to be analysed with relevant statistical procedures. Descriptive labels were assigned to the names of the variables and to the individual values of each variable. The data were presented in the format of percentages, tables, and graphs to reveal the trends, adding support to, or conflicting with the results. Value labels with respect to the variable were determined and divided in some cases and data was tabulated. The result was calculated using percentages, alongside the thematic issues derived from the preliminary surveys.

The data derived from interviews, focus groups, and non-participant observations were analysed to understand what the person was saying from their perspective. Most discussions were audio-recorded. These recordings were transcribed manually, checked, and thematically analysed, and quotations were selected from them, as presented following Bazeley and Jackson's [59] guidelines for qualitative analysis. Each of these strategies was integrated into learning from the data to secure a rounded perspective of the information from respondents. The transcripts from the focus group were slightly different, as multiple voices were involved.

All interview transcripts were created as Microsoft Word documents and were later transferred to a computer-aided data analysis software-NVivo (QSR International Pty Ltd. Denver), for analysis to balance the specificity and context and achieve more robust results in less time. NVivo allows the researcher to organise, analyse, and visualise the data and find the patterns it contains. The keyword-searching function "Analysed" was used to run queries, producing meaning and outputs through visualisation and generate a database bank and nodes where quotations were matched with the general research themes, then coded in more detail in the early texts to capture the nuances of meaning lying within the text. Each theme was matched with the analytical framework and became the heading of a section in the research, thus grounding the research findings from the participant's lived experiences.

3. Results and Discussion

3.1. Household Livelihood Strategy with Physical Capital: Extension of Spaces

Key elements in determining the strategies open to the household in Calabar and the factors which enable them to cope with their limited physical capital are discussed. Table 1 shows the frequency with which households carried out extension work. Out of the sampled households, 48 per cent have made no modifications. The most prevalent change was adding at least one room, which 12 per cent of the respondents have done. These modified units were made by adding a wall, fence, and flooring. As we will see, this can benefit households' physical capital and, in most situations, contribute to improving human and financial capital. Adding rooms was the most popular type of improvement and was highly significant in enhancing the value of the accommodation. There were more and more widespread modifications in Atimbo and Ekurinum, where 23 per cent and 22 per cent of respondents said they had extended their houses. Smaller dwellings were more likely to be extended than larger ones and the increase in household size over time led to severe problems because of the lack of space in the homes. However, all those who made modifications claimed that these were likely to reduce occupancy rates while maintaining access to their livelihood opportunities. This is because they retain all advantages of living in their preferred locations.

Table 1. Extensions carried out by households (%), by settlement.

	Mbukpa n = 112	Atimbo n = 108	Ekurinum n = 95	Ikot Ansa n = 110	Total n = 425
No modifications	52	43	37.9	55.5	47.8
House extension (adding at least one room)	2.7	23.1	22.1	2.7	12.2
Plastered the walls and flooring	13.4	11.1	11.6	10.9	11.9
Added new door frame or window	11.6	11.1	10.5	7.3	10.1
Improved toilet or bath	8.0	5.6	5.3	10	7.3
Improved roofing material	5.4	4.6	8.4	10.0	7.1
Mended cracks and repairs	6.3	0.9	4.2	3.6	3.8

Households with only a few rooms would be more likely to extend than those with many rooms [60]. About 13 per cent of households have plastered their walls and floors in

Mbukpa. However, only 1 per cent have mended cracks and undertaken repairs in Atimbo (compared with 6% in Mbukpa).

These improvements may have been piecemeal and slow. The presence of additional adults in the household, often one's own grown children and their spouses, is a motivation to add rooms. Households who had no desire to improve their houses were asked why. The majority (49%) said it was because they were tenants. Tenants naturally felt that it was the house owner's duty to make repairs and improvements. They would not gain anything by doing so. About 23 per cent do not have money for improvements, and 9.5 per cent said they do not have space to extend. Only 7.3 per cent said their homes had already been extended. While this results from the desire to improve the appearance of houses, such work serves to protect the walls and lengthen the life span of the houses; many of such improvements are intended to provide additional rooms for renting to new migrants (see Table 2).

Table 2. Reasons given by households for not intending to make house improvements.

	Frequency	%
Renting	113	48.7
No money	53	22.8
No space to extend the house	22	9.5
House already extended	17	7.3
Intention to move home	14	6
Waiting for public utilities to be provided before improvements	13	5.6
Total	232	100

The conversion of owner-occupied units demonstrates a strong demand for rented accommodation [60]. Where housing is hardly ever bought or sold, as in most cases in Calabar, some rental stock emerges from owner-occupied housing. House owners not only extended but also rebuilt. This is done by blocking up a door or two inside the house and opening one or two entrance doors to adapt their houses for rental purposes. Besides reducing living costs, house owners can generate monthly incomes if they own additional rental rooms. These alterations and improvements have increased the number of rooms, allowing other households to stay with the original house owners. A common extension method is constructing a new house outside the old house's walls. The back walls of latrines were also considered as a ready-made site for an extension. For example, one resident in Ekurinum says:

"Owing to limited rooms, I transformed the space close to our bedroom into a kitchen. Then I altered the available space in the house into a bedroom for my father and mother and extended the space behind the toilet, small dining room, and bedroom. I will let out one of the rooms for rent. This is a big thing for my family and me." (Interview R31, Mbukpa, F, 39, 11 October 2018).

In Calabar, extensions have also provided individuals with space for overlapping activities and enabled them to use space efficiently. In many cases, they have allowed owners to rehabilitate their buildings and improve the infrastructure. For example, in Ekurinum, adding bathrooms, verandas, kitchens, and/or toilets outside the original building sometimes increases useable space by 3 m. This has greatly improved the supply of additional rooms but has decreased spaces for essential services. Another resident in Mbukpa explained her reasons for the extension:

"I built two additional rooms behind the wall of the only room that I was living in. My daughter lives in the living room and my mother lives in the other room. I am renting out the third room on the same floor—where my mother lives were the original room. I am also planning to add a courtyard and plaster the walls. This will be subject to approval from the local government planning authority. I don't know how long this will take. I was made redundant from the flour mill company in 2005 and have used the little money given

to me by the company to add rooms to this house. Some of the construction work is carried out by my brother, who comes here to help. I fetched water and sand from the nearby stream for construction. This is a new skill for me and helps to reduce the money I need to spend to complete the house.” (Interview, R37, Mbukpa, F, 55, 15 October 2018).

The same approach has been found when subdividing or extending rooms in China [61]. As households evolve, the drive to extend their dwellings increases. In most situations, this depends on physical factors such as the need for space to accommodate the increase in her household size, an aspiration for homeownership, and the need to reduce the cost of construction. It could be added that housing extension enabled them to provide the accommodation to fill a real need or rent out a room for additional income. Another owner-builder in Ikot Ansa who rented out part of his house said:

“My wife and six children occupy the entire house except for the newly extended space. It was for rent from that small space you are seeing that I was able to complete the construction of the rooms to enable my second child to move into the third room. I used to finish part of the building every year, and now this rent is part of my upkeep money (for medication, paying of burial rights and so on).” (Interview, R23, Ikot Ansa, M, 40, 11 October 2018).

Although most of these extensions were done without official permission, most households expressed high satisfaction with them. Despite their strong desire to extend current dwellings by adding rooms, this is sometimes difficult because local planning rules make this use of external space illegal and undesirable. The ability of house owners to use their housing to reduce vulnerability is dependent on the regulatory environment [62]. However, these illegal extensions may project an image of legitimacy and permanence in many ways, but tenure security and legal title give households the motivation to upgrade their housing and the security to use this asset productively [63]. Extenders can ask for retrospective permission because they have made an improvement. Building against the back walls of latrines and adding high fences made from wood and corrugated iron sheets further strengthen this claim. As noted by one developer in Mbukpa:

“Many extensions are carried out informally under limitations, where approval from the local planning authority is difficult to achieve. Notwithstanding, if we [developers] add any structure to our building, we can ask for or claim legitimacy over the land.” (Interview, R29, Mbukpa, M, 55, 22 September 2018).

The household may substitute one asset for another, trading off the availability of physical capital by increasing inputs of financial capital. The incidence of people sub-renting space in houses in all settlements was moderate. However, in settlements such as Mbukpa, since their income does not meet their basic subsistence needs, most landlords let, or tenants sublet rooms. Others create additional space attached to the property for rent. This was possible only for households who had more than one room, from which they could rent one or more rooms for additional income. Renting out rooms for profit is an essential source of income for homeowners and renters who want to sublet, even though it may mean they are crowded or must tolerate the activities of relative strangers who share some of their domestic space. In addition, extensions are built to accommodate migrants and lodgers who pay rent to the house owner or main tenant. Though it is commonly thought that renting is unprofitable, low-income households find it convenient and profitable. An interviewee in Atimbo commented:

“This place is less than four kilometres from the University of Calabar; single rooms are attractive to students and new migrants. I initially rented two rooms and have divided the others into two with the permission of the landlord to let them out to new tenants. My rent is ₦75,000 (US\$187.5) per year for two rooms. I rented out one of the additional rooms for ₦50,000 (\$125) per year. I saved the money to enable me to send my children to school or for medical expenses.” (Interview, R40, Atimbo, M, 32, 11 October 2018).

Here, physical capital (internal space) is traded off against human capital (education or health). Another interviewee said:

“I have been here for about 20 years. Some of the migrant tenants will stay here for some time before moving to accommodation that is more comfortable. Some of our neighbours rent out their rooms too. The landlord is not living in the same house. The disadvantages are the lack of maintenance and improvement of the house and the increased crime rate. I am afraid of what is happening right now. It is somewhat risky to surrender one’s privacy just because of the additional money paid. I am doing it because I have financial needs, and I can earn additional income to enable me to take care of my other needs. The rents are affordable to them (students and new migrants).” (Interview, R29, Mbukpa, M, 55, 22 September 2018).

This shows that even though space is very tight, renting out rooms is a common practice to improve incomes in poor households. Income from rent is the main resource for R29, and it is his only source of saving for his children’s education. R29 represents many other households who experience a harsh time when they must meet their basic needs. At the same time, their children’s education is a family priority. Housing is the common asset such families can trade off and will probably yield them some income. The existing residents have proved their ability to change their physical environment through various transformation activities. However, their agency in pursuit of better livelihood portrays a lack of access to other opportunities, which has become a symbol of poverty [54,64].

3.2. Household Coping Strategy with Income-Related Stress

The household comes under considerable stress when monthly income is insufficient to meet regular domestic expenditures. Respondents were asked how they stretched their incomes to finance their basic monthly expenses. Table 3 shows that 67 per cent of households reduced their expenses (by spending less). The second most frequently used strategy was borrowing from friends and relatives, which 53 per cent of respondents mentioned. A significant proportion (51%) sought help from community organisations. Ekurinum has the highest proportion of respondents (69%) who said borrowing from relatives and obtaining support from CBOs compared with the lowest in Mbukpa (28%). Others include pawning their belongings, engaging in home-based enterprises, and investing in children’s education and urban agriculture.

Table 3. Strategies used by households to meet their basic needs by settlement (in absolute terms).

	Mbukpa	Atimbo	Ekurinum	Ikot Ansa	Total
Social groups and reducing expenses	75	71	55	65	67
Borrowing from relatives and friends	28	59	69	57	53
Seeking help from CBOs	35	59	61	51	51
Pawning belongings	62	45	32	50	47
Home-based enterprise	32	40	7	31	28
Urban agriculture	21	14	2	10	12

In addition to seeking help from organisations, some households sought to supplement their income by rendering different services to their friends, relatives, and others in exchange for cash. As seen in Table 3, 28 per cent of households worked in a home-based enterprise to meet their basic needs. This shift in income-earning activity mainly took place to change their asset management strategies and consumption decisions in the search for survival, security, or improved well-being. For example, an interviewee, R25, who is now a boat mechanic working from home, explains:

“I used to be a primary school teacher before I was made redundant. I am now a boat mechanic. My customers bring their boats to my house. Boat owners know me well because of my role in the community. Some can afford to travel a long distance to find

me. I usually earn ₦3000 (\$7.5) per week if they are many jobs. This is not as much as what I got from my previous work. It is, however, more comfortable for me because I work from home. I am indebted to the cooperative. Before I turned to this business, I sold my motorcycle to add money that I borrowed from the cooperative to enable me to buy the working tools. I am working hard to pay back the debt.” (FG2, R25, Atimbo, M, 34, 11 October 2018).

Several studies have found that changing jobs or losing the main income earner’s job is also not easy and can be unsuccessful if the main income earner owes large debts or lacks skills in the new job [7,65,66]. Moreover, borrowing from moneylenders is often at high interest and risky. Therefore, it is wise to continue with the primary income source while other household members attempt to find employment or become self-employed. In most cases, if these initiatives are unsuccessful, then at least the household can continue to survive on the primary income for some time.

3.2.1. Social Groups and Reducing Expenses

Individuals who are willing to share with the community their skills, experience and time are more easily able to withstand the material pressures they face in their everyday lives. The households in all surveyed settlements are very cash poor, but some have remarkable resilience and resourcefulness and are embedded in the social setting of their communities. Moreover, social kinship networks built up in long-established communities have helped the poorest household livelihood strategy. According to a respondent in Ekurinum:

“I got a job with support from my old neighbours. When my mother heard about the employment advertisement from my neighbour who ran her grocery shop within the neighbourhood, we quickly contacted her for more details.” (Interview, R41, Ekurinum, F, 35, 29 October 2018).

Another householder said she chose Ikot Ansa because of its proximity to her children’s school and the type of dwelling she could afford. However, the home has serious problems, and several facilities such as the toilet, bathroom and kitchen were shared. Nevertheless, she managed to save to improve the house. While her grandmother suffers from high blood pressure, they thought it was manageable to live there and they could afford to pay the rent. In the interviewee’s words:

“It is better than moving back to Mbukpa, where I spent almost all my money transporting my children to school every day. What about the time spent? It is not that the place is very comfortable for us. There are no toilets or bathrooms here. But there are two important benefits, the proximity to my children’s school and I am learning hairdressing from my friend living down the street. I do not think I will move out from here (Ikot Ansa) soon. At least as time goes on, we will have our own house within this locality.” (Interview, R34, Mbukpa, M, 41, 11 October 2018).

The location of their neighbourhood makes a significant contribution to the livelihoods of poor households. Therefore, the location choice and supply of good quality housing have important social and economic consequences and opportunities for employment and income [67]. The most common problem with the location of a dwelling housing is that it is located far from the resident’s means of livelihood, and the high cost of transport is unaffordable for the affected households. However, interviewee R34 trades her living quality to save on the expense of education and transportation. Interviewee R34’s long-term plan was to save money to enable her to purchase her own land for housing. This is a typical method used by many households that forfeit their living conditions (physical capital) in the short term for their children’s education (investment in human capital) with a long-term plan to acquire an asset (physical capital). This in many cases is the only hope for households to escape from poverty in the future. This discussion clearly illustrates how people sustain their livelihoods by using their social networks. It also demonstrates how social capital (learning skills from a friend) is vital for improving livelihoods [48,68,69].

It can be seen from the above discussion that cutting costs on transportation and using social networks are the main expense-reduction strategies. Residents trade their physical, human, and social capital for greater financial capital. The combination of social and physical assets offers additional support to households, such as promoting home-based enterprises, giving them the flexibility to extend their houses using their own labour and proximity to jobs, schools, and markets through their locational choices. Housing location and labour markets are critical in fostering and enhancing productivity and growth.

“Land speculation is at all levels, from the large entrepreneur to the smallest squatter. Because land values are continually rising in Calabar, these rises incorporate large elements of monopoly rent, high-income groups will tend to exploit it both for investment and their personal use. An interviewee explained: Before moving into Mbukpa, we use to live in a very small, rented house. The plot was barely accessible due to the poor road network, but its size was big and sufficient to accommodate a spacious house that could satisfy the need of my family.” (Interview, R41, Ekurinum, F, 35, 29 October 2018).

Housing is linked to infrastructure service, land and distances to employment and other urban activities. Locational choice can save household expenses on transportation, and they can remain close to employment hubs (thus enhancing residents’ human capital). However, the central location also makes their future tenure very precarious.

3.2.2. Home-Based Enterprises

Home-based economic activities are essential to the livelihoods of the poorest households, and their businesses rely on their neighbourhoods [70]. Therefore, a key consideration for many low-income households is whether they can use the dwelling as a resource for generating an income and obtaining and improving housing. A few household members in the survey settlements are involved in home-based enterprises such as sewing, repairing, running grocery shops, selling firewood, making paper bags, keeping livestock, and making curry powder. Small shops in dwellings are an almost universal phenomenon. Commercial uses of dwellings are quite common in all sampled settlements except Ekurinum, where they are fewer uses (Table 4). Where houses are used for commercial purposes in Mbukpa and Atimbo, this usage occupies a larger share of the house than elsewhere (more than one-fifth at the median). Although they are most common in Mbukpa (in one in four houses), they occupy only 22 per cent of the space in these houses. Thus, they may present quite a commercial aspect compared with the main residential areas and even allow for an incomplete classification of commercial and other uses; the areas are still overwhelmingly residential in terms of land use. Only 33 houses had shops or commercial activities in a dedicated space.

Table 4. Mean number of houses with home-based enterprises, by settlement.

	Mbukpa	Atimbo	Ekurinum	Ikot Ansa
Mean of houses with commercial activities	22	17	11	20
Median (IQR)	21 (10, 41)	18 (6, 30)	7 (5, 12)	19 (8, 38)

Indeed, the commercial uses reported in all the sample settlements include 30 shops (some plots had five in a row along a street frontage at the side of the house), mainly making jeans, children’s wear, jackets, and T-shirts, and three small-scale factories. Two of them were bakeries and one was a water purification factory. A water factory provides water and wastewater service to residential and commercial sectors of the economy of the settlement. In the Atimbo, 65 houses were used for commercial, manufacturing, or other purposes; they occupy only 17 per cent of the space in those houses at the median, and 18 at the third quartile. The activity varies from hairdressing (usually hair plaiting) on a veranda to a large bread factory in a structure that may be a simple wooden shack or a small semi-detached bungalow. One such bungalow on a large plot contains a carpentry

workshop, a building materials shop, a motorcycle mechanic and tyre sales outlet, a battery repairer, a motor spares shop, a football viewing centre, and a dressmaker. There is also a church at one end of the street and a small primary school at the other end of the road leading into mile 18 (Odukpani junction).

In Ekurinum, 17 houses have retail outlets (mainly food shops, selling soft drinks and a few household items). They only occupy 11 per cent of the space in those houses at 7 per cent in the third quartile. There are five workshops (for carpentry, motorcycle mechanic and general laundry services), two bars and a health clinic. One house has an office at the rear and a doctor's consulting room.

In Ikot Ansa, there are several home-based enterprise productions involved in various kinds of handicrafts and shoe making. Food is also sold in houses and around the housing area. However, this activity only occupies 11 per cent of the space in those houses at the median and only 19 per cent in the third quartile. Though the areas may present quite a commercial aspect to the main roads and even allow for an arrangement of retail and other uses; the areas are still overwhelmingly residential in their land-use characteristics. Some income-earning activities only require a little upfront financial capital, and such premises may serve different functions, such as meeting places and recreational functions. Home-based enterprises allow low-income households to earn a living and provide many important services not fulfilled by the authorities. An interviewee supports this view.

Interviewee R42 and his family live in a house that has been newly reroofed, with the addition of one room and a separate toilet for her two girls. Their grandmother also lives with them. She and her family moved into Calabar in 1992 from a nearby local government area (Bakassi). This was after the ceding of the peninsula to Cameroon. The house originally had two rooms with about 10 × 12 m of space in the back. After some years, they added rooms at the back of the building and converted the front into a grocery shop, which the grandmother runs. The new extension has a shower and kitchen space behind the building. The household of one of the adult children lives in one of the rooms. The grandmother lives with four other children in two newly added spaces. One of the children works for the federal government, and the others are studying at the university. The extension in the front of the house is used as a corner store. She sells food items such as rice, beans and *garri* (locally processed cassava). Most of the customers are her neighbours and have lived there for a very long time:

"Extending my building has provided additional space for this retail shop. My daughter helps to see how we can make our daily living from the sales, and the farm produces from the little garden my last daughter is cultivating also provides additional income for us. Retail has been an important contribution to our livelihoods. Though we have minimal land, it enables us to supplement our food and income through sales of grain and livestock. The highest patronage I receive is from the church down the street. I am also a member, so people come in here to buy food items any time there is a programme." (Interview, R42, Ekurinum, M, 49, 29 October 2018).

In 2018, Interviewee R43 had an operation, which used up the profits from her little business. At that time, the provision of national health insurance to her daughter, who works with the Federal Government Ministry, had not yet been made. So she spent about NGN 170,000 (USD 425) on her treatment:

"I have spent all my savings in the hospital—even my little business capital was added to make up for what I paid. My daughter is now helping to see how we (my family) can make our daily living and the farm produce from the little garden my last daughter is doing." (Interview, R43, Ekurinum, F, 49, 29 October 2018).

Her poor health is a stress on the household, and they have had to postpone treatment as a livelihood strategy. They reduce their expenses to ensure there is enough to fund their income-generating activity. As observed from an interview with R43, the grocery shop was possible only because there was space to accommodate it, which they could use for additional income. It is found that the extension provides the ultimate environment for

trading resources between domestic and productive activities. This may reflect a growth in the importance of home-based enterprise to low-income livelihoods, and within these limitations, an extension typically can create households' accommodation and income-generating opportunities.

3.3. Urban Agriculture

Urban agriculture is an income diversification strategy for many households to cope with household insecurity and malnutrition [71]. In the Calabar metropolis, urban agriculture can be undertaken on plots, open strips of land along roads, and vacant land on large open spaces in or near the settlement or on balconies. There is an obvious but unquantifiable effect on the wealth of households through having the convenience of cultivating fruit and vegetables and the production of eggs, milk, and meat from small animals for one's own consumption or sale. Some 12 per cent of households engaged in urban agriculture to meet their basic needs. Most people in Ekurinum have gardens outside the built-up area and grow a few crops and a few trees. Household depends on urban gardening, and the engagement with urban agriculture has been driven by necessity, not by choice, but more that they are more dependent on it for income and nutrition. While it is hard to imagine that household feed themselves largely from their own agricultural production, some grow popular crops such as vegetables and pumpkins for sale. For example, residents who seek greater community involvement and fresher healthy food become involved in urban agriculture. One interviewee lives in a one-bedroom room house with his wife and four children. A vacant plot of 35 m² next door provides space for urban gardening, digging vegetable fields, carrying sacks of rice, clearing land, and collecting non-timber forest products. A respondent in one of the focus groups said:

"I am cultivating vegetables on vacant land and around surrounding where they are easy to sell so that people can quickly get fresh food items." (FG2, R19, Atimbo, M, 29, 29 October 2018).

The plot is also used to keep animals and birds. Chickens, goats, ducks, and pigs are kept for meat for extra income. A rainy season garden is also a useful supplementary source of livelihood for almost 5 per cent of households in the study area. Although production per household is often small, most of the food consumed must be purchased, and its overall contribution to the household economy and natural capital is welcomed. It does more than provide income for the household because it helps reduce food expenses and adds to the quality and amount of food consumed. This increase in urban agriculture has remained an important source of food for large urban food-insecure dwellers. However, the household knew that this type of work would only keep them bumping along the bottom and might soon move on to survive (unless is less costly in terms of time and money). One respondent, R18, says:

"The plot is very small and both rooms open onto the backyard. My wife is a very keen gardener, growing fruit and vegetables such as okra, spinach and bitter leaf. Gardening has made an important contribution to our livelihoods and production for home consumption. Though we have a very small plot, to enable us to supplement our food and income through the consumption and sometimes the sale of product like grain and fruit. It saves us more money than purchasing food." (FG, R18, Ekurinum, M, 43, 10 September 2018).

Households can be portrayed as winners and losers, from those who have built productive and sustainable futures based on urban farming, to others who are scraping by the land, and still more that have embraced various urban livelihood strategies to survive or as a means to maximise their welfare within a constraint of limited assets. There are other reasons that households engage in urban agriculture, this ranges from income enhancement and supplementary employment to the high price of food in the market and income or assets diversification. A local community leader within the Ikot Ansa context commented:

"I cannot always depend on the government or NGOs, although moving from our former residence turned our lives upside down. I grow vegetables and fruit like my neighbours

to minimise expenses. However, capital is needed to start farming. The proceeds from the sales are most often used to pay debts or medical bills.” (FG, R15, Ikot Ansa, F, 34, 10 September 2018).

Income level influences the amount of afford and time devoted to urban agriculture. The case of R15 reveals several interesting issues; R15 said she invested NGN 5000 (USD 10) in preparing the soil and buying seeds and fertiliser, for which she now gets a harvest worth ten times her initial investment per month. She sells part of it and uses the rest for household consumption. R15 aspires to expand her garden in the future by cultivating green chillies and tomatoes. To reduce her daily food costs, she obtained the initial knowledge of home gardening from a local government agricultural officer. She then spent her savings and spare time preparing the soil. Finally, she planted the vegetable and fruit plants and seeds she had received as gifts from friends or bought from the local market. Sometimes she exchanges her harvest of vegetables and fruits with her neighbours and even sells them, especially bananas and cocoyam, which gives her an additional income. This makes the maximisation of assets of the household complex. The location of the household and community of which it is a member influences the availability of natural and physical capital. This also includes the opportunity for farm and off-farm purposes. However, there is little scope for intensification of urban agriculture in the study area to the extent that its production would lift the household into food sufficiency.

3.4. Pawning Belongings

A less visible but important method that households depend on in the face of vulnerability to shock is by pawning their belongings. As seen in all sample settlements, 47 per cent said they pawn their assets (including jewellery, livestock, furniture, and electronics equipment) as coping strategies due to shocks. According to one respondent in Mbukpa:

My husband was a clerk with the University of Calabar before he died in 2016. When I got married, we lived in a one-bedroomed house with four children. It was a very difficult time for us. Although it is better than now, our privacy was restricted since my four children shared one room and my late husband and I the other room. A year later, we moved to Mbukpa and lived there for ten years before buying this land from a community member. Despite its location, I felt free and independent in it. Then the children were still young, and responsibilities were shared between my husband and me. Now, one of the girls is at university and two of my children (a girl and a boy) have written their senior secondary examination. When she was in her first year, I pawned my jewellery to pay school fees for the girl in the university (the jewellery was like a treasure to me). It was my traditional marriage gift from my late husband (with cultural implications).

It is seen that this provides an essential but temporal solution in times of economic downturn. Yet the contribution to the entire study seems far less than the potential, given all the shocks and stress faced by urban informal residents. Another respondent in Atimbo added:

“My last child has been withdrawn from school until the first girl is out of the university. Some of his mates are already two steps ahead of him (in junior secondary three). I am the one paying all the fees; I can’t afford to pay all the children’s school fees from this little business. The option was to pawn my belongings to pay his fees. We eat with the income from my sales and the profit is very low and the cost of living is going up. As a widow with four children, I depend on this place for business and living with my children.” (Interview, R44, Mbukpa, F, 50, 29 September 2018).

As seen from the discussion, it is very common in all case studies that the deteriorating assets force households to adopt risky livelihood strategies, which could expose them to more vulnerability. Furthermore, land inheritance practices discriminate against and exclude women. Withdrawing children from school can leave the household in worse situations of vulnerability in the long term, so they remain in a vicious cycle of poverty.

3.5. Migration

It has been found that cheap accommodation in informal settlements acts as a reception centre for new urban migrants and eases their transition to urban life. However, young migrants unable to afford rent are forced to move in with homeownership relatives, increasing the household dependency ratio and per capita incomes [62]. Respondents explained that, because of the difficulties associated with living conditions, it is usually young and energetic people who move away from home to seek employment or income source:

“The first time I came to Calabar from the village was in 1992 to look for work. I usually stay for few months before going back to the village (Oron). During the rainy season, I go back to the village to farm and come back again after the rain has stopped. When I got married, it became difficult to leave my wife and children behind. The extended family thing is no longer here—it is dying. So I decided to move them [my family] down to Calabar in 2002. The house is not actually in good condition and many amenities are lacking but we can afford the rent. It is better now that we are together. I have a little job and we can manage, but we don’t have enough space in the house to accommodate us and we walk a long distance to get water. We are eight people living in this house. The good thing is that we are better than off than in the village and the money raised can enable us to meet some of our household needs.” (FG, R18, Ekurinum, M, 43, 10 September 2018).

In this case, it is seen that development beyond the urban areas was reworking livelihoods in the rural areas. However, social exclusion is a common issue among most migrants in their bid to cope with their financial difficulties. For example, another respondent who migrated to Calabar in 2005 explained:

“I am better off here than when I was in the village. After completing my secondary education, I wanted to remain in the village under the sharecropping land tenure system. But my parents disagreed and arranged for my travel to Calabar. I am not yet close to any of my neighbours, and I don’t have any relatives here. I still look for a job, sometimes to go about asking people is very difficult. Who will let me know when there is an employment opportunity? It would have been easy if I had lived here for some time.” (Interview, R28, Ekurinum, M, 40, 29 September 2018).

Without formal education and having grown up in poverty, the respondent migrated to Calabar with the sole aim of looking for a job to meet the basic needs of his household and to make a livelihood. However, this respondent’s social capital is low, owing to the short time he has lived in Calabar, and his relationship with his neighbours is not yet very close. This has obviously affected his livelihood as he obtains very limited information about employment.

3.6. Investing in Children’s Education

A household’s ability to manage their capital assets to take advantage of the opportunities for economic activities is constrained by the demand for housing maintenance and the levels of education, skills and health status of household members [72]. Interviewee R29 is a daily paid construction worker from Atimbo with a primary school education. He is married with six children. In 2007, he and his family moved from a three-bedroomed rented house in the federal housing estate into a two-bedroomed house in Atimbo. The original house has been extended to the front and side for a toilet and garage. Having been assigned a corner plot, they have more land than average, allowing more space for an extension. R29 earns a very small income from his daily paid construction work but needed to decide whether they should add a room to accommodate new family members or use the little income to send the children to school. When asked, he said:

“I had planned to extend to accommodate my mother, who is here with us because of ill health, and other extended family relatives who have moved in. That plan has been changed to make provision for my children’s education. In the past, our parents sent us to school. Then they asked us to leave school because they could not meet the financial

costs of education. Nowadays, we understand the value of education as it helps to obtain secure employment and links with development organisations outside this community. When someone is educated, or they are an educated member of the family, their living condition improves because you have someone in the family that can link up with people who provide infrastructure like water and also intervene in difficult situations. Also, if someone is looking for a job in the formal sector, there is a level of education you must achieve. Even though there are few formal jobs, there is high hope that something good can come out of having a child with a higher degree. We are going to wait for more years before thinking of extending our house or building a new one. That is the sacrifice we can make for them.” (Interview, R29, Mbukpa, M, 55, 29 September 2018).

Investment in education may lead to better employment opportunities. Educating a family member is seen as a form of social protection against future livelihood outcomes—a career rather than a job. It increases the number of social networks with more influential people. Thus, investment in education is vital to economic growth, to accumulating necessary skills and to providing support from networks. The researcher knows from experience that the cost and uncertainty of education required to get a job bring instability to the household. This interview shows that an educated person is always needed to serve as a mediator in the development and support of the household. However, many households withdraw children from school to work and carry out household activities (such as collecting firewood, fetching water, and doing housework). Another respondent explained:

“I withdrew my children from school because I was finding it difficult to pay school fees for them. I am a civil servant with CUDA and have not been paid for the past year. My salary is 7500 [US\$18.57] a month. I have seven children (four girls and three boys). We thought we were going to continue with their education, knowing what it entails, but the cost was discouraging. My two boys go out for daily labour on a nearby site and sometimes come back with little money to support us. They are growing into adults. The girls help with the housework. We spend much time teaching our girls at home, pending when they can return to school. Even then, we still need to send them to a formal school. My last son wrote his first school exams last year but there was no money for him to continue.” (Interview, R45, Atimbo, M, 60, 29 September 2018).

It is crucial to acquire a good level of education (human capital) and at least pass Ordinary Level examinations to satisfy the minimum prerequisite for obtaining secure employment and controlling the future. For example, a respondent during a focus group said:

“It would help if I had an additional educational qualification. When I meet someone who could connect me to a job, they want to know if I have a degree or additional certificate. We are at the receiving end of everything; we battle with poor infrastructure, children’s education and poor health.” (FG2, R20, Atimbo, F, 38, 12 September 2018).

The education of children is a priority in the household. This is why parents invest in their children’s education amidst dire economic difficulties. A respondent, who is a motor mechanic living in Atimbo, explains:

“I did not have an opportunity for a better education; that is why I found myself in this situation. Before now, the fees for my two children at university used to be ₦25,000 (US\$62.5) a year, in addition to the bus fare of ₦200 (US\$0.5) per day. Every year, the fees keep increasing and there are many extra fees for new books, supervision fees, and photocopying. I spent at least ₦75,000 (US\$187.5) this year for both of them. The fees are very expensive for me in light of my income, which is very small. That does not stop me from keeping them going. I don’t want to discontinue their education even with the financial difficulty it entails. My wife and I are ready to sacrifice all our comfort (by living in poor rental accommodation) for their sake. With nine people living in this house, space is tight. We asked the landlord to extend the house to the rear with two extra sleeping rooms. We put that aside to pursue this very important task before us. When the children

finish studying and find a job we can start living again.” (Interview, R35, Atimbo, M, 50, 19 September 2018).

Households enrol their children in schools to secure their future by sacrificing their physical and social capital to pay for education (human capital) which is the only way they can escape from poverty. Interviewee R35 has to live in cheap rented accommodation and reduce social activities so that they can save money (membership in a group often entails obligations). The significant expense they can save is on accommodation. Cheap rents are used to save money on other assets with long-term benefits. In this context, it can be concluded that bridging and bonding capital formation assets are essential to building physical capital in the long run. However, in the medium term, these households remain trapped in poverty [62].

4. Conclusions

This paper found that the ability of households to avoid or reduce their vulnerability and increase their economic productivity depends on their initial assets and on their ability to transform them into income, food, or other necessities. This finding is compatible with other sources which consider available assets as the resources which households draw on in order to carry out their livelihood strategies [29,53]. Respondents described not only a low income but emotional distress and problematic household situations. The coping measures taken by urban households to compensate for their disadvantages, such as occasional or even sustained provision of food, employment, and input such as urban agriculture, can be seen objectively as an attempt to disguise the nature of the dispossession process which has led to dependency [73]. The interaction between the opportunity to make a livelihood and household assets influences the strategies they adopt and their outcomes. However, the management of assets by the poor household and the activities pursued is opportunistic or reactive as the household adjusts to unpredictable circumstances rather than planned strategies. Most low-income households depend on their own resourcefulness and efforts to deal with their difficult living conditions by adopting strategies to compensate for and by intensifying or diversifying the use of resources. The basic strategy they often use to increase their assets capital (physical, human, social, financial, and natural) include building extensions and renting out rooms [60]. Others involve using their social networks and reducing expenses: undertaking home-based enterprises and urban gardening (increasing own production of food, livestock rearing, aquaculture, etc.) or through a range of off-farm income-earning activities. In addition, some poor households had obtained money from informal money lenders at high interest rates, migrated to the city and even pawned their valuables when all their other options were exhausted as the key source of supplementary income.

Although most livelihood strategies are constructive, households also respond in ways that destroy their assets, such as taking their children out of school, pawning their belongings, and borrowing from moneylenders. Withdrawing children from school has adverse effects on a household’s human capital [62]. This finding agrees with Levy and Freiberg [74], who recognise the complex and profound effect of social exclusion on many aspects of life that are not economic. Another example is that most households have chosen to live in cheap accommodation, which is overcrowded and of poor quality. This decision involves a trade-off made by households themselves according to what assets they own, their priorities, and their desires regarding livelihood outcomes in the long term.

The research findings also show that community programmes, not individual programmes, can contribute to this population living in informal settlements but should be developed with an emphasis on the participation and involvement of the people who are themselves coping with limited assets. Therefore, first, targeted policy interventions to support the poor urban household to mitigate risk and reduce vulnerability should:

- Alleviate poverty by promoting income-generating opportunities, transforming the role of the informal sector [33], and regulating the employment processes. Emphasis should be on improving human capital development through participatory access

to service and welfare provision [72], education and skill programmes, agriculture and sources of off-farm incomes, food processing and basic food at a lower price [75], investing in infrastructure projects (abundance of common property resources), providing a mutual support network, and lowering taxes on struggling businesses.

- Home-based enterprises can succeed in the study area because relatively little initial capital is needed [43]. It is inexpensive to work from home and easy to expand and has a ready-made local market for consumption. Chambers [76] stresses the need for poor households to have an extensive coping or adaptive strategy by diversifying their income. Policy focused on investments with the right incentives by upgrading the business skills of poor households already engaged in home-based enterprises would significantly increase earnings and facilitate asset accumulation.
- Development programmes should address the perceived reduction in social capital and provide opportunities for other social security provisions (comprising health care, education, employment generation, public safety, and social assistance). This is in agreement with Chambers [77] that development interventions should put the most important first, including the significance of realities, peoples' values, knowledge, choices and perceptions. These efforts, however, should go together with investing in training and improving financing to reduce housing costs. In particular, by making finance available and small short-term loans that would allow households to buy construction materials and hire skilled labour to perform specific relatively small, specialised building tasks.
- Policies should promote enabling and local resource-based partnerships and participatory strategies to provide infrastructure. Infrastructure investments through community contracts can play a catalytic role in related aims such as job creation, community capacity-building, small-scale enterprises, and the institutional development of local government. More resources, particularly from the public sector, should be invested in collaborative upgrading at the community level. The government can help speed up infrastructure delivery by addressing bottlenecks caused by inefficient administration processes in land allocation and costs. The private sector, NGOs, and local communities should be encouraged to partner with the public sector to invest in infrastructure. This will require the development of a regional capital market and detailed attention to removing policy and legislative barriers to private sector investment in labour-based technology to improve economic productivity.
- Without the provision of new and improvised rooms by existing residents, severe servicing problems would exist. It would be beneficial to develop a system of centrally supervised savings and loan associations, such as the National Housing Fund and the Nigeria Mortgage Refinance Company (including commercial banks, insurance companies, pension funds, and bonds). In addition, specific institutions and sectors should be set up to help low-income households and disadvantaged groups gain more access to housing finance. For example, loans of between USD 5000 and 20,000 with a repayment plan of 5–10 years would suffice to help finance most of the houses found in the survey.

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