

Physical and Socio Economic Affordability Elements that Regulate formal low cost housing tenure in Bauchi Metropolis

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Abstract

Purpose: The current practice housing policies of Nigeria did not highlight on the affordability of formal low cost houses. Low income earners don't have sufficient income to buy a calorie of foods and meet basic necessities like clothing, rent, fuel, utilities, transport, communications, medical expenses, education, and on a broader sense, housing. Objectives of this study were (i) to investigate the current practices of housing policies in Bauchi Nigeria; (ii) to evaluate the affordability elements in Bauchi Nigeria, (iii) to study the relationship among the FLCH affordability elements in Bauchi Nigeria. Methodology employed includes descriptive statistics and Pearson correlation.

Findings: The study found that there are no laws, sections or guidelines regulating the affairs of formal low cost housing. The design does not reflect user need; it did not conform to their culture, family background and size. No provision for public participation in the policy documents. Formal low cost houses are located at the peripheries of the town outside trekking distances which repel beneficiaries because of the awkward location. Residents have higher number of defendants, lower income and lower qualification. This study found that design, location, participation, highlight on affordability and family issues have prominent impact on affordability and hence be incorporated in policy document. It can therefore be clinch that formal low cost houses in Bauchi, are not affordable. Conclusively, these affordability elements should be upheld to ensure sustainable formal low cost housing affordability policy for the low income groups. The physical and socio-economic elements are the catalyst in the housing provision aspect. These elements can bridge the wide fissure being the basic features, essentials and the fundamentals of a good policy.

Keywords: Affordability elements, formal low cost housing, housing policy issues, house ownership

1. Introduction

The provision of affordable and decent housing for Nigerians has been a top priority for successive governments since the country's independence in 1960. Unfortunately, Nigeria has yet to develop an effective housing delivery program that would enable the country to achieve the goals of its housing for all policy. The federal government would require more than N56 trillion to provide 16 million housing units to bridge the housing deficit in the country. Nigeria is sitting on a growing housing deficit estimated at 17 million housing units, and even a higher number of Nigerians living in either substandard or sub-human accommodations, feelers indicate there are plans to change this grim social reality. However, after expending colossal resources worth billions of dollars, it recorded a miserable failure as a result of lack of political wills; institutionalize policy and continuity, politicization of the programs, political corruption, poor funding and inadequacy of mortgage institutions, poor socio-economic elements among others have contributed to the acute failures (Awotona, 1990; Ikejiofor 1999b; Aribigbola, 2008). Housing is a universal word having many synonyms such as home, shelter, dwelling, accommodation, messuage, maisonette, etc. People the world over have known housing in their own perspective. Shelter is defined as providing somebody with protection from the weather, danger, etc. Similarly, home is defined as the place where one lives, especially with ones family. Regarding house definition, Wikipedia Encyclopeadia (2005), defines house as a human built dwelling with enclosing walls and a roof. It provides shelter against precipitation, wind, heat, cold and intruding human beings and animals. When occupied as a routine dwelling for humans, a house is called a home (Sulaiman, Baldry, & Ruddock, 2005). Public Housing is defined as a Housing unit owned and operated by the government, usually for rental purposes to low-income families. This is in contrast to low-income housing, which is privately owned but government supported through a variety of incentives. Housing accommodation is interpreted under part 1, section 3, Housing Development (Control and Licensing) Act 1966; Act 118) and Regulations as " including any building, tenement or messuage which is wholly or principally constructed, adapted or intended for human habitation, or, partly for human habitation and partly for business activities, but does not include an accommodation erected on any land designated for or approved for commercial activities".

2. Concept of Housing Policy

Policy means Plan of action, statement of aim and ideas, especially one made by a Government, political party, and business company. Policy is extremely difficult to define with any precision (Hill and Bramley, 1986). The term is used to depict those parameters shaping acts and strategic moves that direct an organization's essential resources towards perceived opportunities in a changing environment (Bauer and Gergen, 1968). Policy is designed to give direction, coherence and continuity to the courses of actions (Lichfield, 1978). Housing policy can be defined in terms of measures designed to modify the quality, quantity, price, ownership and control of housing (Malpass and Murie, 1994). Housing policy is the implementation mechanisms to make a fundamental switch from a concern about housing as an output to housing inputs (Hyuck, 1986). In terms of government responsibilities in delivering adequate shelter, paragraph 61 of the Habitat Agenda (1996) cited to wit: "*All governments without exception have a responsibility in the shelter sector, as exemplified by their creation of ministries of housing and agencies, by their allocation of funds for the housing sector, and by their policies, programs and projects. The provision of adequate housing for everyone requires action not only by governments, but by all sectors of the society including the private sectors, non-governmental organizations, communities and local authorities, as well as partner organizations and entities of the international community. Within the overall context of the enabling approach, Government should take appropriate actions in order to promote, protect and ensure the full and progressive realization of the right to adequate housing*".

2.1 An over view of Nigerian Formal low cost Housing Programs

Housing policy issues in Nigeria can be outlined to the colonial period as a result of the sudden outbreak of disease in the 1920s. Conscious struggles were not made to construct houses for the low income groups and the general public by the then government. Governments in Nigeria defied the problem of housing through:

- Low-Cost Housing (1971-1975; 1976-1980)
- Site and Services (1981 –1985)

Kumo expatiated that the 16 million houses would be constructed at a conservative cost of N3.5 million per unit. It requires urgent injection of funds from both the government and the private sector (Nigeria @ 52, bridging the housing deficit, Monday, 01 October 2012). Minister of Lands, Housing and Urban Development said government plans to build one million housing units annually in a bid to achieve the housing target in the Vision 2020 (Nigeria's housing deficit: Balancing the equation). The National Housing Policy (NHP) launched in 1991 had as its ultimate goal ensuring that all Nigerians owned or had a prudent access to decent housing accommodation at affordable cost by the year 2000AD. The objective of the policy was to make the private sector the main medium for the organization and delivery of housing products and services. The Federal Mortgage Bank of Nigeria (FMBN) as deconsolidated by Decree No 82 of 1993 was vehemently empowered with, the functions to receive, manage and direct contributions to the National Housing Fund (NHF) from registered individuals and companies. Under the program, workers earning above #3,000.00 (RM60.00) per annum, were compelled to save up to 2.5 per cent of their monthly earnings into the NHF as contributions. Commercial as well as Merchant Banks were expected to offer to the FMBN 10 per cent of its non-life funds and 40 per cent of its life funds in the real property development out of which not less than 50 per cent must be paid to the FMBN at that time. Responsibilities were vested and assigned to the three levels of governments and other agencies such as FMBN, FHA, State Housing Corporations, Ministries and Departments respectively in the 1991 NHP. At the target year of the Hosing policy (i.e. 2000), the policy could not apprehend the expected bearings on the built environment as a result of some elements and factors associated with inadequacies of the PMIs, lack of access to land, title to land and the acute problem of mortgage loan affordability among others.

The federal government of Nigeria constituted a 15 Man Committee to review the existing housing policy and merge same with the New National Housing Policy (NNHP) of 2002. The 2002 NNHP has as its primary goal ensuring that all Nigerians own or have access to decent, safe and sanitary housing accommodation at affordable cost with secure tenure through private initiative. The significant innovations were the transition from government-built to privately developed housing units (Mabogunje, 2003). In essence, there was detachment of public sector in housing provision to that of the private segment. Under the new Housing policy, repayment period for NHF loan recovery has been increased from 25 to 30 years, while the loan repayment period for housing developers was 24 months. Interest rates charged on NHF loans to PMIs has also been brought down to 4 per cent from 5 per cent while loan lending rates to contributors was then reduced to 6 per cent from the previous 9 per cent all in an attempt to attract audience to the 2002 NNHP housing policy. The policy makes contribution to the scheme optional for persons earning less than the national minimum wage. In addition to the foregoing, and in recognition of the obtuse shortage of residential accommodation in some major cities in the country such as Lagos and Abuja, and in order to facilitate the actualization of the policy, the federal government introduced some intervention measures commencing with a pilot project that involved the construction of new forty thousand

(40,000) housing units per annum nationwide with at least 1,000 units in each state of the federation, 1,500 units in Kano and River states, 2,000 units in Lagos State and 3,000 units in Abuja, the federal capital territory. Nigeria is classified as low-middle income country with a gross national income (GNI) of US\$175.6 billion, it has GDP growth rate of 3.0 %, per capita income of US\$1,160 and about 84 % of the population below US\$2 a day (World Bank, 2010). Nigeria is an OPEC member (OPEC, 2009) and justifies one fourth of Africa's crude oil production (Ogwumike & Ogunleye, 2008; FGN, 1991; 2006). A number of policies, incentives and programs were designed and implemented over the years to create vibrant Organized Private Sector (OPS) in housing sector of the economy and government to retire to a position of enabler, (Fortune-Ebie, 2006). NHP 1991 formally recognized the private sector contribution to housing in the country, but prior to these changes, experiences shows there was an overwhelming dominance of the private sector provision and little contribution from government. The Federal Government recognized housing as part of its social responsibility in the 3rd (1975- 1980) and the 4th (1981-1985) National Development Plans.

2.2 Formal Low Cost Housing Production in Nigeria

Housing delivery in Nigeria becomes the responsibility of the private market Institutions. About 90% of urban housing is produced by private developers. Due to housing demand postured by rural-urban migration, which accounts for 65% of urban population growth, the fixed supply of urban land, and the inflation of rental and housing ownership costs, Nigerian analysts have focused on five major motives for the inadequate housing supply across the country as follows:

- Shortage of professionals and qualified personnel has made it impossible for the Nigerian building sector to meet the pressing demand for housing. Professor Agbola asserted that the lack of admiration for technical education can be married to the lack of competent teachers in technical education, and the decline of the apprenticeship system all have resulted to a poorly performing construction sector, where acquiring a contract and mobilization fees became the key to wealth.
- Trouble of having land for new developments. It was established that over 25% of new houses costs were related to land costs. The Land-Use Decree of 1978 and the subsequent Land Use Act of 1980 were produced to make it possible for urban land to be acquired easier.
- Public housing has not been able to produce sufficient housing to meet the accentuating housing demands. Amid 1981-1985, public housing voted to produce 200,000 new housing units. But shockingly, only about 37,650 housing units, or 19%, were actually achieved.
- Public housing is too expensive for low-income groups. Approximately 70% of the population cannot afford public housing, so public housing becomes housing solution only for the elite, and not for the LIGs.
- Public housing is mostly built on the urban edge, usually on a remote location away from the central business district (CBD) where the low income groups abode.

2.3 The idea of Public-Private Partnership (PPP)

The enabler perceptions have a long history prior to the present time when it was adopted and encouraged by the international institutions and governments of developing countries (Harris, 2003). The practice of self-help housing cherished the concept of 'enablement' and became applicable when the World Bank started tracking the neo-liberalism policies (Pugh, 1994a, b., Yeboah, 2005). The strategy necessitates placing of private sector as the succeeding medium for housing delivery, while the governments were to provide an enabling environment (World Bank, 1993; Keivani and Werner, 2001a, b). The opponents strongly oppose the formal housing market to take control of delivery of housing and enable by the state (Baken and van der Linden, 1993; Jones & Ward, 1995; Ortiz, 1996; Keivani and Werna, 2001b). The general position of these scholars is that the formal private market has never being on the provision of housing to the LIG in developing countries and the objective of profit maximization; it would further forge market bends. Formal private firms should not be the focus of the enablement to meet the LIGs housing demand in the developing countries, (Keivani and Werna 2001b). The formal private market as the strongest should be enabled in developing countries, because of their economies of scale to fulfill the desired result having lasting solution to the problem (World Bank, 1993 and Malpezzi, 1994). The success of the private developers in the country shows that the housing provision for LIG is subjected to government policy regulations and controls which the private developers were able to perform in meeting the enabling environment and the government policies and incentives, the formal private sector is capable of meeting the housing demands of the LIGs in the developing countries (Abdul Aziz 2007 and Sale, 2008). Substantially, the misinterpretation of the enablement that suggests complete disengagement of the state from housing provision, where in actual sense the enablement requires more of state involvement in housing delivery is questionable (Mukhija, 2001; 2004; Sengupta, 2006). The fundamental goal of the enablement, the private sector is assigned the responsibilities of physical construction, funding, implementation and in some cases the

management of the housing units. On the other hand the government contributes by setting the goals, supervision and monitoring, standardization and provision of legal, institutional, economic and policy frameworks (Sengupta, 2006).

3. Theoretical Framework of the Study

It is factual that some LIGs have restricted earnings. Most of them have family burden that is not commensurate to their earnings and they have no capital source to establish another means of livelihood as a compliment to the lean income. The dependency ratio apart from being high, is usually marred with family issues such as ties, ethics and race. Ties relates to the link and bond that exist between family members, ethics tells the morality and cultural beliefs, while race respect the rivalry of their culture. This pathetic gap can be bridged by engaging into the low cost housing policy the affordability elements in housing provision aspect. These elements are the basic features, essentials and the fundamentals which once incorporated into new policies for low income housing will definitely ensure affordability. However, the elements are further split into physical and socio-economic elements (see figure 1).

3.1 Lack of Affordability of the Low Cost Housing by the Low Income Groups

The lack of affordability is usually as a result of low income, dependency ratio and other family issues which results into incessant poverty. The concept of Hard core poverty was defined as Income less than the food PLI which is based on nutritionally based diet. The very term "Hard core" is not in international use. The World Bank and UNDP, use the concepts of "Absolute" and "Relative" poverty. The following terms were defined:

- Rural poverty rate is the percentage of the rural population living below the national rural poverty line.
- Urban poverty rate is the percentage of the urban population living below the national urban poverty line.
- National poverty rate is the percentage of the population living below the national poverty line. National estimates are based on population-weighted subgroup estimates from households.
- Population below US\$1 a day and population below US\$2 a day are the percentages of the population living on less than \$1.08 a day and \$2.15 a day at 1993 international prices

3.2 Problem of Low level of income

The reality for the poor is that subsidies are likely to be removed and new taxes applied to finance notable projects. If the truth can be told, the authorities are obsessed with creating more infrastructures even though much of what has been created remains underutilized. It must be noted that the public sector continues to be the largest single employer. It has however failed miserably to follow the policy of removing sentiments in the public sector. The solutions to the issue of income gaps between groups cannot be decided through setting targets and assuming reform and broad ideas of human capital development in the manner proposed. Nation's effectiveness is determined by the quality of its human resources which is determined by lack of knowledge and talent of the work force. It must be recognized that promoting the educational system demands more than money; throwing money at the problems will not solve matters. There is an urgent need to move towards reforms that will recover the quality of the system, yield graduates that are more furnished to meet the challenges of a bitterly modest world.

3.3 Problems of Family Issues

Low income earners have greatest family size because of incessant marriages attached to respective beliefs, family relatives depending woefully on them who bear the same notion and mission (Ogu & Ogbuzobe, 2001). The intangible life situations have been seen on the tangible elements of low cost housing affordability. The traditional vision of family life is one of a strong family unit led by the father and or husband, who largely has outright rule and control of the family. This control also extends to selection of house location and marriage partners, which was often arranged for the children. Much has changed today in the family make-up. The father still remains the strong family leader and decision maker. The father no longer arranges the marriage, although this still exists in some of the most traditional families and in less developed areas.

3.4 High Dependency Ratio on the low income groups

The earnings of the low income groups is not sufficient to buy a calorie of group of foods that would meet the basic nutritional needs of the members of the household. The income is also not enough to meet other basic necessities such as clothing, rent, fuel and utilities, transport and communications, medical expenses, education and recreation, and on a broader sense, housing (UNESCO, 1998). They have higher dependants merge with their insufficient income.

3.5 Solution to the problems identified

The problem can be ameliorated using good formal low cost housing affordability policy that critically highlights on the affordability of the formal low cost housing units pursuant to the spelt out 'Affordability Elements' such as the physical and socio-economic elements. These elements are further discussed and elaborated.

4. Physical Elements for Low Cost Housing Affordability

The Physical elements for sustainable Low Cost Housing Affordability for the Low Income Groups include:

- Infrastructures, recreational facilities and utilities
- Provide new Houses at suitable Locations
- Ensuring Accessibility and road network
- Home Design shall reflect the user needs
- Provide Health and Safety Structures
- Effective mass transport modes

4.1 Provision of new Low Cost Houses at suitable Locations

In an attempt to ensure sustainable policy for low cost housing, new housing should be supplied for the low income groups at suitable location that suit them (UNESCO, 1998). The latter is a tangible element for the supply of housing either for the low income earners or the other superior classes. Before low income earners consent to a new location, they do consider factors like distance because most of them do not have mobility, they wholly depend on public transport. Another important factor is family issues regarding ties, belief, bond, morale, rivalry, etc. Low income earners do not readily leave their ancestral neighbourhood for other distant locations (Wally Sercombe1993). Adaptation of culture in new Site & situations (Scott & Tilly, 1982) is equally important in the siting of low cost houses for the low income earners. These scholars suggest that low cost housing should be designed and situated where the users will feel still part of their former neighborhoods.

4.2 Ensuring Accessibility in Low Cost Housing Estates

Roads are designed and built for primary use by vehicular and pedestrian traffic, storm water drain and environmental considerations. Drainage lines are laid with sealed joints in the road easement with runoff coefficients and characteristics adequate for the land zoning and storm water system. Drainage systems must be capable of carrying the ultimate design flow from the upstream catchment with approval for the outfall from the appropriate authority to a watercourse, creek, river or the sea for drainage discharge (Shire, 2006).Road network is the backbone of every neighbourhood. Estates lacking good roads will vehemently repel occupants especially the low income earners whose income is terribly restricted as a result of low level of education. Therefore, new low cost housing policies should ensure accessibility in low cost housing estates.

4.3 Provision of Facilities, Amenities and Utilities

The provision of local facilities within residential development is one of the means to increase vitality, provide a sense of community and enhance the social and economic sustainability of the low cost housing development. Large scale housing schemes must provide necessary services and community infrastructure to enable new growth to be satisfactorily accommodated. Otherwise they will place further pressure on already overstretched facilities and services. The need for local neighborhood facilities to be provided in conjunction with proposals for new residential development will be part of the new low cost housing development process. Where such a need is identified it will be a requirement that the developer provides for this need as an integral part of the development. Any provision considered necessary will relate fairly and reasonably in scale and kind to the impact of the development proposed. Local neighborhood facilities include schools, local shops, recreational and sport facilities. Where these are required, they should be incorporated into the overall design and layout of the development, designed to a high standard and located to provide focal points and landmark features. The location and design of such facilities should also respect the amenities of proposed and existing housing (Northern Ireland Planning, 1991).New policies should henceforth highlight on infrastructures for new low cost housing estates for the low income earners to reciprocate.

4.4 Design Low Cost Housing to reflect the user needs

Home culture is that shared, learned, symbolic system of values, beliefs and attitudes that shapes and influences human perception and behavior in the home. Smart home design should enable different people from respective walk of lives to live a better and quality life (Dewsbury, 2001). This can be achieved by facilitating the matching of design of new low cost houses to the needs and aspiration of the low income groups who are the ultimate users of the estates (UNESCO, 1998; Curry et al., 2001). However, new construction shall incorporate and adapt

family issues or culture in the site and situations (Scott and Tilly, 1982). This is because family issues and home design are closely entrapped (Sercombe, 1993). There are meanings that can be unknotted in the home culture which are often present in any style of a home design. These meanings are important in determining residential satisfaction and often dictate the way people want to live and how they want their homes to be built. It is these meanings that home designers need to comprehend and incorporate to achieve a good residential design, one that reflects and speaks for the people who live in them (UNESCO, 1998; Curry et al., 2001).

4.5 Health and Safety Structures

Fear of crime and the responses to it is an intangible element that affects neighbourhood perceptions of safety and security which is central to transforming neighbourhoods. Peoples' perceptions and beliefs about disorder and crime are as important risk factors for neighborhood decline as actual crime and disorder rates. If people perceive an area to be declining, then they are likely to vacate accordingly. Managing people's impressions of their neighborhood, including what they see and feel when they are in public spaces, is a vital component of transforming neighborhoods. Certain types of crime and disorder have a particularly potent impact upon local perceptions of neighborhood security. They alter how people think, feel or act because they are interpreted as indicators of the local level of safety. Rather than increasing feelings of security or safety, actions taken by the police and other agencies can amplify the problems people perceive. Giving neighbourhood communities a voice, working with them to produce solutions and establishing 'control signals' are all important in enabling recovery to repelled estates. Control signals include environmental measures, such as well-maintained public spaces, and types of behaviour, such as a mix of people feeling comfortable enough to use public parks (Tilly, 2005). However, chronic non-communicable and communicable diseases like hypertension, diabetes, intentional and unintentional injuries, tuberculosis, rheumatic heart disease, and HIV infection are recognized to exist in low cost housing areas because of the late complications of these diseases that the formal health sector sees and deals with. However, in low income housing estates, little is known about the magnitude, distribution, and risk factors for these illnesses before they manifest as stroke, myocardial infarction, kidney failure, suicide, multidrug-resistant TB, heart valve disease, and AIDS. Because low income houses are not formally linked economically, socially, and culturally to the rest of the urban population, the formal health sectors inevitably end up dealing with the consequences of the chronic diseases. Therefore, new housing policies for the low income groups should highlight on these elements. Equally important is the issue of security in low cost houses, low income earners have restricted earnings that is not sufficient to cater for the basic necessities, talk less of security, new policies should then highlight on security issues for the low income housing neighbourhoods as elaborated above (Tilly, 2005).

4.6 Effective and Efficient Mass Transport modes

Transportation affordability means that individuals can have access to basic goods and services which usually means that households expend less than 20% of budgets on transport and less than 45% on transport and housing collectively. Transportation affordability is affected by the number of vehicles that a household must own, the costs of owning and driving each vehicle, indirect costs such as residential parking, and the quality and costs of alternative modes such as public mass Transit systems, Ridesharing, Cycling, Walking, Car sharing and Taxi services. Lower-income households tend to be particularly impacted by the costs of alternative modes, since they rely solely on public transport. People who must commute to work or school have greater transportation requirements than people who do not work or work at home. People with physical disabilities or other special needs tend to require more frequent and expensive transportation services. Many planning decisions affect transportation affordability. Modern transport planning responds well to demands of wealthy travellers, not to the needs of the low income earners who are basically poor. Current planning supports automobile, air and freight transport but does much less to improve affordable modes such as walking, cycling and public transit travel, or to insure that affordable housing is available in accessible locations. This worsens economic problems since many workers find it difficult to access education and employment because motorized modes require costly infrastructure, impose external costs, and are resource-intensive, leading to increasing dependence on public transport modes that are not readily available (McCann, 2000).

Smart growth and development can increase transportation affordability by creating more Accessible Land Use and improving affordable Transportation Options such as public transit, ridesharing, cycling and walking. Development programs can help increase the prestige of affordable modes such as walking, cycling and transit, making it more socially acceptable for low income residents to use them. As a result, greater portion of low income household wealth is devoted to mobility in Automobile Dependent communities than in communities with more balanced transportation systems. McCann (2000) found that households in sprawled regions devote more than 20% of their expenditures to surface transportation, while those in communities with

more efficient land use spend less than 17% representing savings of hundreds of dollars a year. Equally, lower-income households that rely on automobile transportation tend to spend a relatively large portion of their income on basic transportation, while those that use other travel modes spend much less (STPP 2003). Lower-income households in suburban locations tend to be particularly susceptible to high transportation costs (Dodson and Sipe 2006). Transportation increased significantly as a portion of typical household expenditures during the last century, from 3.1% in 1918, to 15.1% in 1961, and up to 25.7% in 1987 (Johnson, Rogers and Tan 2001). Fan and Huang (2011) developed a contextualized transportation affordability analysis framework that accounts for the different travel demands and abilities of different demographic and geographic groups.

5. Socio-Economic Elements of FLCH Affordability

The Socio-Economic Elements for Sustainable Low Cost Housing Affordability by the Low Income Earners include:

- Policy to Highlight on Affordable Low cost Houses
- Basis for participation in policy deliberations
- Low cost housing Loans be readily available
- Family issues regarding ties, ethics and race
- Provide Incentives for HH Improvement
- Feeling of self worth and destined

5.1 Policy to Highlight on Affordability of Formal Low cost Houses

Affordable housing is a term used to describe dwelling units whose total housing costs for either rented or purchased unit are deemed affordable to those that have a low household income. Affordable housing is a housing which is reasonably adequate in standard and location for lower or middle income households and does not cost so much that a household is unlikely to be able to meet other basic needs on a sustainable basis. In the United Kingdom affordable housing includes social rented and intermediate housing, provided to specified eligible households whose needs are not met by the market. In the United States and Canada, a commonly accepted guideline for housing affordability is a housing cost that does not exceed 30% of a household's gross income. When the monthly carrying costs of a home exceed 30–35% of household income, then the housing is considered unaffordable for that household. Determining housing affordability is complex and the commonly used housing-expenditure-to-income-ratio tool has been challenged. Canada, for example, switched to a 25% rule from a 20% rule in the 1950s. In the 1980s this was replaced by a 30% rule. India uses a 40% rule (Tilly, 2005).

Income is the primary factor that determines housing affordability. In order to understand challenges of making housing affordable, it is essential to understand trends and disparities in income and wealth. Housing is often the single biggest expenditure of low income families. The most common approach to measure the affordability of housing is to consider the percentage of income that a household spends on housing expenditures. Studying affordability looks at the regular hourly wage of full-time workers who are paid only the minimum wage. The hope is that a full-time worker will be able to afford at least a small apartment in the area that he or she works in. Some countries look at those living in relative poverty, which is usually defined as making less than 60% of the median. In their policy reports, they consider the presence or absence of housing for people making 60% of the median income (Tilly, 2005). The market has been unable to meet the growing demand to supply housing stock at affordable prices. Although demand for affordable housing, particularly rental housing that is affordable for low income earners, has increased. Potential home buyers are forced to turn to the rental market, which is also under pressure. An inadequate supply of housing stock increases demand on the private and social rented sector and homelessness (Schmuecker, 2011).

5.2 Provide Incentives for Household improvement

The household is the basic residential unit in which consumption, inheritance, child rearing, and shelter are organized and carried out. The household is the basic unit of analysis in many social, microeconomic and government models. The term refers to all individuals who live in the same dwelling. In economics, a household is a person or a group of people living in the same residence. Most economic theories assume there is only one income source to a household; this useful simplification does not reveal reality. In Social Work, the household is a residential grouping defined similarly to the above in which housework is divided and performed by householders. Care may be delivered by one householder to another, depending upon their respective needs, abilities, and perhaps disabilities. Different household compositions may lead to differential life and health expectations and outcomes for household members. Eligibility for community services and welfare benefits depend on composition sustainable low cost

housing development policies should alarm with the improvement of poor people. Low income group must be heard by decision makers, provide incentives for them, they must have influence on matters that affect their future destinies.

5.3 Participation of Low Income Earners in Policy Deliberations

Public participation is a political principle or practice, and may also be recognised as a right. The terms public participation may be used interchangeably with the concept or practice of stakeholder engagement and participation. Generally, public participation seeks and facilitates the involvement of those potentially affected by or interested in a decision. The principle of public participation holds that those who are affected by a decision have a right to be involved in the decision-making process. Public participation implies that the public's contribution will influence the decision. Public participation may be regarded as a way of empowerment and as vital part of democratic governance. It is of paramount importance that the low income groups be allowed to participate in policy deliberations that concerned their future destinies. By coming closer to the policy makers, they can be able to express their minds which will help the policy makers in their endeavours. They will feel pride and self worth and this can solve most of their grievances ("Principles of Public Participation" Co-intelligence.org. 2008). Therefore, policies must give this lower segment a feeling of self worth.

5.4 Low Cost Housing Loans and Mortgages be Readily available

The policy makers should facilitate home ownership through making mortgages and home loans readily available to the low income groups on whose favour the facility is reserved. In most instances, some mediocres prevent the right people to benefit from the facility, the authority concerned should step into rectify the situation. In addition, the mission of USDA Rural Development's Single Family Housing Guaranteed Loan Program is to assist low to moderate income rural homebuyers achieve their dream of homeownership. Rural Development partners with approved local lenders to extend 100% financing opportunities to eligible rural individuals and families for the purchase of safe and sanitary dwellings. Guaranteed loans have assisted thousands of homeowners to purchase a home with affordable interest rates. Applicants must purchase a home within the eligible rural areas, and have a household income that does not exceed the established limits where the home is located (Sale, 2008).

5.5 Family Issues marred with Ties, Ethics, and Race

The Marxists linked their analysis of the family to changes in the mode of house production. Wally Sercombe (1993) argues that family ties and the mode of home production are closely entrapped, and the transformation of the former will follow closely on the heels of the latter. In other words, a certain mode of production will enable the imitation of a certain family form while impeding the development of others. Scott and Tilly (1982) pointed out that the transformation of family relationships in the context of structural changes was complex and involved the adaptation of traditional values in new site and situations. My opinion conforms to this point of view, hence, new policy highlighting on low cost housing affordability shall consider family issues in their decision making process. Therefore, the achievement of the physical and socio economic elements and incorporating same into the current practiced housing policies of both Malaysia and Nigeria is the only remedy for rectifying low cost housing affordability problems for the low income groups.

5.6 Esteemed Feeling of Selfworth

The inferiority complex suffered by the low income earners is as a result of their abandonment by the policy makers and the appropriate authorities. However, buying home after living in a slum, rental housing or transitioning from homelessness, home ownership can give the low income earners self-worth and a large enhancement. Home ownership, particularly when it follows tough times, such as unemployment or homelessness, is something that the lower segment of the society can take pride in. Social security recipients are clearly on very low incomes. It is a common experience to be a little short of cash at times, but to be constantly short of funds becomes quite depressing, and this is the usual situation of the low income groups. The problem is aggravated by the high cost of housing as such, many poor people simply give up on the prospect of owning a home and have to rent. But rental costs continue to upsurge and the demands made on public housing are enormous and great, leading to long waiting lists because there is no updated record of the existing low income groups otherwise, the slum dwellers. These are also distressing and depressing. Public insights of the predicament of low-income earners also replicate a lack of understanding about how tough it is to live on low income.

A person's social standing is often determined by the job they have and the income they receive. People without a job and an income can have a real problem with low self-esteem. Low-income earners may start to

avoid social interaction so that they do not keep amplifying to others what hardship they are suffering. This is a problem for society because people on low incomes who feel they are denied opportunities and even sympathy sometimes turn to criminals. There is a link between poverty and augmented occurrence of crimes and other petty misconduct. This creates a further problem for socio-economically disadvantaged people, in that the majority of honest individuals may be judged by the actions of a few. Accommodation is certainly a foremost issue for most low-income earners. It is not impossible that they may own their own residence, but hard times often leave people with few assets of their own. Rates of home ownership are also declining incessantly. The New South Wales Department of Housing provides slow-rent housing for people who are unable to afford their own accommodation. Families that need assistance must meet certain suitability requests in order to gain access to public housing. There are some alternatives to public housing for low-income families. Rental assistance is also available under the 'Rentstart' scheme, which assists low-income earners to arrange their own private rental accommodation. The location of public housing can make it more difficult for residents to travel to work, and it also identifies persons from these areas as recipients of public assistance.

5.7 Sustainable Formal Low Cost Housing Affordability Policy for the Low Income Groups

The physical and socio-economic elements must be attained to achieve sustainable affordability for the formal low cost housing in the housing provision aspect. This touching cavity can be spanned by engaging the low cost housing policy affordability elements.

6. Methodology

This study implored quantitative approach to determine the relationship between affordability elements (independent variables) and the formal low cost housing (dependent variable). Quantitative research designs are either descriptive (subjects usually measured once) or experimental (subjects measured before and after a treatment). A descriptive study establishes associations between variables (refer to figure 2).

6.1 Sample Size for the Study

The population size in this study is 1190 (Refer to table 1) and the sample size taken is 402 (Morgan, 1970). Morgan established that a population size of say 3000, the sample size to be taken from the population is 341. But however, this study took 402 sample to have sufficient data from the sample drawn. The sample size drawn is the representative of the whole population (Morgan, 1970).

6.2 Respondents of the Study

The respondents of this study are policy makers and the residents of the formal low cost housing estates Bauchi, Nigeria. Policy Makers in Bauchi, include the council chairman, secretary, 5 head of departments, 5 supervisory councilors, district head, 5 district head staffs, Land officer, Divisional police officer (DPO), Emirate council representative, Director fire service, state development board, ministry of lands, ministry of works, state security service (SSS), state government representative, central market chairman, local authorities, state water board and the treasurer of the local government.

6.3 Population Sample in Bauchi, Nigeria

The Ministry of housing, Bauchi have made known the type and different formal low cost houses with their prices. Table 2 depicts the respective formal low cost housing estates in Bauchi, Nigeria with their various units. The population for this study in Bauchi, Nigeria is 1190 and the sample taken is also 402, while Policy makers in Bauchi are up to 30 and so, 30 respondents were taken as the sample (Morgan, 1970). The total population in the whole study area is 431 (refer to table 3).

6.4 Questionnaire Survey

In the questionnaire survey, 431 questionnaires were distributed and 408 questionnaires were gladly returned while out of the 431 questionnaires administered, 23 questionnaires were not yet returned (refer to table 4 and 5 respectively).

6.4.1 Pilot Survey

Preliminary survey was conducted at Bauchi, Nigeria where same 40 questionnaires were distributed and 35 (87.5%) were gladly returned. The value of the Cronbach's Alpha run is 0.591 signifying a fruitful forth survey.

6.5 Method of Data Analysis

Analysis of data is a process of inspecting, cleaning, transforming, and modelling data with the goal of highlighting useful information, suggesting conclusions, and supporting decision making (Ader, 2008). Table 6 shows the techniques used in achieving the spelt out objectives of this study.

6.6 Descriptive Statistics

This study used descriptive statistics and investigated the current policy issues (objective 1 and 2) and in analysing the background of respondents. Descriptive statistics is the act of quantitatively describing the main features of a collection of data. This generally means that descriptive statistics, unlike inferential statistics, are not developed on the basis of probability theory (William, 2006).

6.7 Reliability Test for Data set of Residents of FLCH, Bauchi, Nigeria

The reliability test run on the data set of residents of FLCH Bauchi Nigeria was significant. The Cronbach's Alpha value is 0.914 showing statistically reliable data (Refer to table 7).

6.8 Correlation

Correlation is a statistical technique used to determine the relationship among the FLCH affordability elements to achieve objective 2 and 3 of this study. It shows whether and how strongly pairs of variables are related. The main result of a correlation is called the correlation coefficient (or "r") that ranges from -1.0 to +1.0. This study used correlation to determine the relationship between:

- The strong significant relationship between physical affordability elements in the FLCH
- The strong significant relationship between socio economic elements in the FLCH

The closer r is to +1 or -1, the more closely the two variables are related. If r is close to 0, it means there is no relationship between the variables. If r is positive, it means that as one variable gets larger the other gets larger. If r is negative it means that as one gets larger, the other gets smaller (otherwise known as an "inverse" correlation). While correlation coefficients are normally reported as $r =$ (a value between -1 and +1), squaring them makes them easier to understand.

7. Findings on the Current Affordability issues from the responses of policy makers

23% of the policy makers said the formal low cost houses in Bauchi are not affordable to the low income earners on whose favor the houses were constructed. In the same vein, survey conducted on the policy makers, Bauchi, Nigeria, 27% of the policy makers said that there is no provision or explicit section that talks on the formal low cost houses affordability to the low income earners on whose favor the houses were constructed. 23% said there are no guidelines and laws regarding FLCH (see table 8).

7.1 Findings on the Physical Elements Bauchi, Nigeria

Formal low cost housing estates were located at the peripheries of the city, beyond walking distance according to 27% of the policy makers. Majority of the low income groups in Bauchi, Nigeria do not have means of transportation. 42% said roads provided are laterite roads, 23% said design does not match user needs, 27% said schools are provided at every district, 27% said clinics and recreational facilities are provided at districts also (see table 9).

7.2 Findings on the Socio Economic Elements, Bauchi, Nigeria

27% of the policy makers said the current policy document of Bauchi, Nigeria did not highlight on the affordability of the formal low cost houses by the low income earners, 42% said family issues were not considered and 23% said no section provide for house hold improvement incentives. Low income earners do not participate in policy meetings according to 17% of the policy makers and this make them feel depressed they avert. 50% of them said housing loan is given but only 50% of the house cost (see table 10).

7.3 Relationship between Physical Elements for the FLCH Bauchi, Nigeria.

Pearson correlation coefficient is significant at the 0.01and 0.05 levels (2-tailed). Values close to +1 or -1 reveal the two variables are highly related while values near 0 either + or - indicate weak relationship. The coefficient values of location and design 1 and 0.583, respectively was significant at 0.01 and 0.05 levels (2 tailed). The coefficient values of access road and health facility 0.507 and -0.455, respectively was significant at 0.01 and 0.05 levels (2 tailed). The coefficient values of recreation and education facility 0.248 and 0.263, respectively was significant at 0.01 and 0.05 levels (2 tailed). Refer to table 11. Positive values indicate that the two variables are positively correlated, meaning the two variables vary in the same direction. Negative values indicate that the two variables are negatively correlated, meaning the two variables vary in the contrary direction. Values close to +1 or -1 reveal the two variables are highly related while values near 0 either + or - indicate weak relationship.

7.4 Relationship between Socio Economic Elements for the FLCH Bauchi, Nigeria.

Pearson correlation coefficient is significant at the 0.01 and 0.05 levels (2-tailed). The coefficient values of participation and home loans 1 and 0.133, respectively was significant at 0.01 and 0.05 levels (2 tailed). The coefficient values of incentives and policy highlight on affordability 0.053 and 0.015 respectively were significant at 0.01 and 0.05 levels (2 tailed). The coefficient values of family issues and self-worth -0.020 and 0.002, respectively were significant at 0.01 and 0.05 levels (2 tailed). Refer to table 5.18. Positive values indicate that the two variables are positively correlated, meaning the two variables vary in the same direction. Negative values indicate that the two variables are negatively correlated, meaning the two variables vary in the contrary direction. Values close to +1 or -1 reveal the two variables are highly related while values near 0 either + or - indicate weak relationship (refer to table 12).

7.5 Recommendation to Policy Makers

Policy makers Nigeria should adopt the findings of this article. Once it is adopted, it will vehemently solve the problems regarding location, access roads, schools, clinics, recreational and educational facilities. Problems of self-worth, family size and culture will equally be ameliorated in consonant to the mingling of the low income houses with the high and medium houses. Different types in designing of houses should be provided to the low income earners who have higher number of dependants and seem to need more rooms instead of the living room provided.

8. Conclusion

Intangible socio economic elements like participation, family issues, culture and policy highlight on affordability should be included in the current policies. Giving room for public participation in the deliberations of policy makers may uphold the provision of the principle of public participation which holds that those who are affected by a decision have a right to be involved in the decision-making process. Tangible elements like design and location should also be considered in policy documents, to ensure and achieve a sustainable formal low cost housing affordability policy for the low income groups. Result of this study further shows that formal low cost houses in Bauchi, Nigeria are not within the reach of the residents because of low income sequel to low education level. The awkward location of FLCH at the peripheries of the town tends to repel residences that do not enjoy other facilities. Results on the physical elements displays significance values ranging from 0.000 – 1.000 shows statistically highly significant relationship between the elements. Positive values indicate that the two variables are positively correlated, meaning the two variables vary in the same direction. Negative values indicate that the two variables are negatively correlated, meaning the two variables vary in the contrary direction. Values close to +1 or -1 reveal the two variables are highly related while values near 0 either + or - indicate weak relationship.

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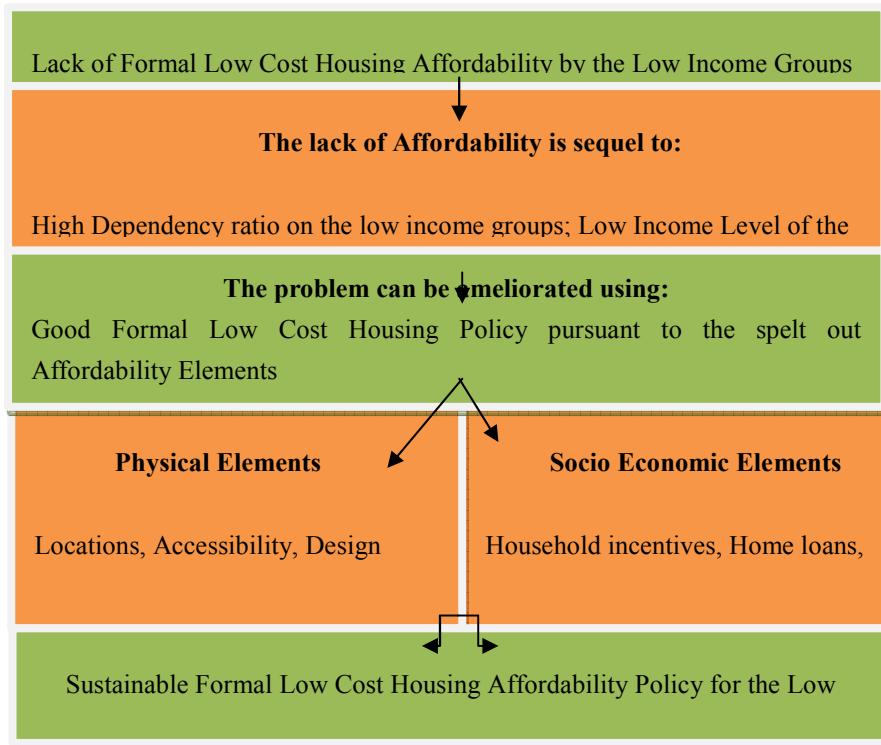


Figure 1 Theoretical Framework

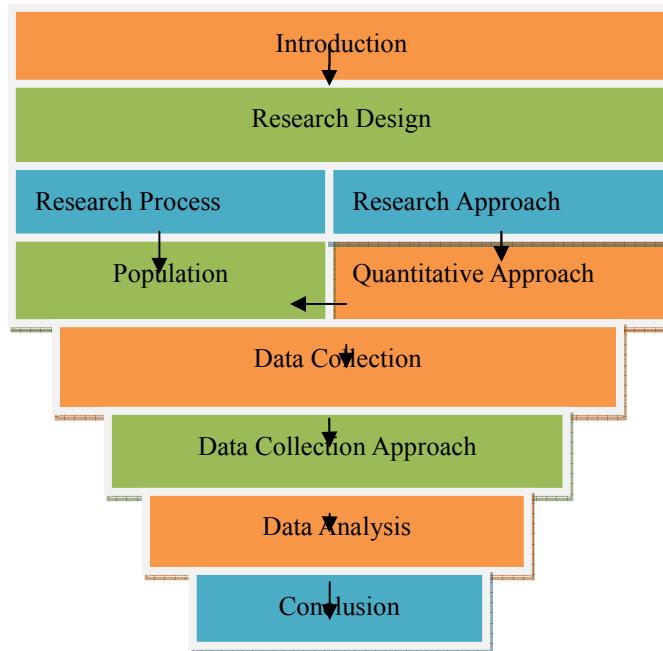


Figure 2 Research methodology flow

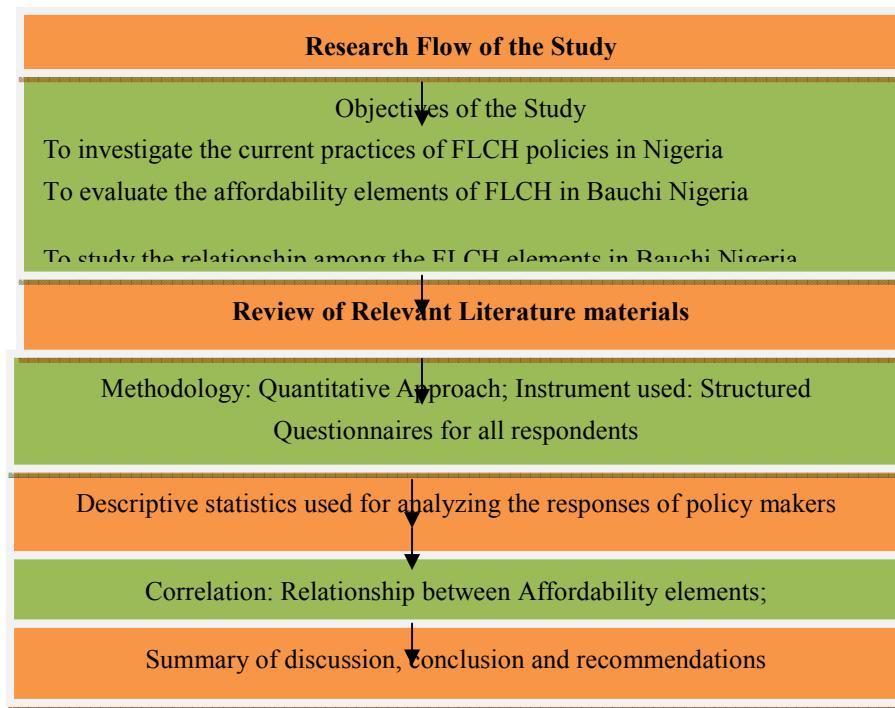


Figure 3 Illustration of the study flow

Table 1 Sample Size for the Study

Population Size	Sample Size, (Morgan, 1970)	Sample Size Taken in
2613	341	400

Source: Morgan, 1970

Table 2 Formal Low Cost Houses in Bauchi, Nigeria

	Housing Estate	Units	Percentage	Type	Price
1.	Adamu Jumba	42	3.52	2 BR SD	3.5M
2.	Ibrahim Bako	123	10.33	2 BR SD	3.5M
3.	Bello Khaliel	40	3.36	2 BR SD	3.5M
4.	State low cost	230	19.32	2 BR SD	3.5M
5.	Tambari	300	25.21	3BR BUN	4.5M
6.	Tafawa Balewa	94	7.89	3BR BUN	4.5M
7.	Gubi	208	17.47	3BR BUN	4.5M
8.	Mudalawal	30	2.52	2 BR SD	3.5M
9.	Nurses Quarters	60	5.04	2 BR SD	3.5M
10.	Res. Engineers	23	1.93	3BR BUN	4.5M
11.	Water Board Quarters	40	3.36	2 BR SD	3.5M
12.	Total	1,190	99.95%	SAMPLE : 402 Units	

Source: Ministry of Housing, Bauchi, 2012.

Table 3 Population and Number of Respondents

S/n	Population	Policy makers	Residents	Total
1.	Bauchi	29	1190	1220

Source: Field Survey, 2012

Table 4 Questionnaire administered to Residents in Bauchi

S/no	Questionnaire	Number	Percentage	Location
1.	Administered	402	100.00(%)	Bauchi
2.	Returned	379	94.27(%)	Bauchi
3.	Not returned	23	5.72(%)	Bauchi

Source: Field survey, 2012

Table 5 Questionnaire administered to Policy makers in Bauchi

S/no	Questionnaire	Number	Percentage	Location
1.	Administered	30	100(%)	Bauchi
2.	Returned	29	96.66(%)	Bauchi
3.	Not returned	1	3.33(%)	Bauchi

Source: Field survey, 2012

Table 6 Analysis techniques used in achieving objectives of the study

S/n	Objectives	Technique
1.	To investigate the current practices of FLCH in Bauchi Nigeria	Descriptive statistics
2.	To study the affordability elements of FLCH in Bauchi Nigeria	Descriptive statistics
3.	To study the relationship among FLCH affordability elements	Correlation

Table 7 Reliability Statistics for Residents of FLCH

Cronbach's Alpha	N of Items
.914	52

Source: SPSS statistics

Table 8 Policy makers on the Current Affordability issues

S/n	Current Policy Issues	Number	Percentage
1.	Policy Highlight on FLCH	8	27
2.	Whether FLCH are affordable	6	23
3.	Guidelines regulating FLCH	6	23
4.	Laws regarding affordability of FLCH	8	27

Source: Field survey, 2012

Table 9 Policy makers on Physical Elements

S/n	Physical Elements	Number	Percentage
1.	New construction at suitable location	8	27
2.	Design to match user needs	6	23
3.	Provision of access roads	11	42
4.	Provision of health facility	8	27
5.	Provision of educational facility	8	27
6.	Provision of recreational facility	6	23

Source: Field survey, 2012

Table 10 Policy makers on Socio Economic Elements

S/n	Socio Economic Elements	Number	Percentage
1.	Policy Highlight on FLCH	8	27
2.	Incentives for Household Improvement	6	23
3.	Housing Loans	13	50
4.	Participation in Policy Deliberations	5	17
5.	Feeling of Self worth	7	24
6.	Family Issues	11	42

Source: Field survey, 2012

Table 11 Correlation on Physical elements for residents

		Location	Design	Access	Health	Recreation	Education
Location	Pearson Correlation	1	.583**	.507**	-.455**	.248**	.263**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
Design	Pearson Correlation	.583**	1	.642**	-.643**	.355**	.381**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
Access	Pearson Correlation	.507**	.642**	1	-.512**	.303**	.253**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
Health	Pearson Correlation	-.455**	-.643**	-.512**	1	-.271**	-.359**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
Recreation	Pearson Correlation	.248**	.355**	.303**	-.271**	1	.580**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
Education	Pearson Correlation	.263**	.381**	.253**	-.359**	.580**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

**. Correlation is significant at the 0.01 & 0.05 levels (2-tailed).

Table 12 Correlation on socio economic elements for Residents

		Participation	Loan	Incentives	Highlight	Family issues	Self -worth
Participation	Pearson Correlation	1	.133**	.053	.015	-.020	.002
	Sig. (2-tailed)		.009	.308	.766	.696	.964
Loan	Pearson Correlation	.133**	1	.390**	.422**	.369**	.035
	Sig. (2-tailed)	.009		.000	.000	.000	.493
Incentives	Pearson Correlation	.053	.390**	1	.702**	.727**	.007
	Sig. (2-tailed)	.308	.000		.000	.000	.893
Highlight	Pearson Correlation	.015	.422**	.702**	1	.702**	-.033
	Sig. (2-tailed)	.766	.000	.000		.000	.518
Family issues	Pearson Correlation	-.020	.369**	.727**	.702**	1	.034
	Sig. (2-tailed)	.696	.000	.000	.000		.514
Self-esteemed	Pearson Correlation	.002	.035	.007	-.033	.034	1
	Sig. (2-tailed)	.964	.493	.893	.518	.514	

**. Correlation is significant at the 0.01 &0.05 levels (2-tailed).