

**PROVISION OF AFFORDABLE HOUSING FOR LOW INCOME GROUPS IN
TAMALE METROPOLITAN AREA THROUGH SELF-HELP HOUSING
APPROACH**

By

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DECLARATION

I hereby declare that this thesis is my own work towards the MPhil degree and that to the best of my knowledge; it contains neither materials previously published by another person nor material which has been accepted for the award of any other degree of the University, except those that due acknowledgement has been made in the text.

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ABSTRACT

Rapid population growth in developing countries and cities around the world in the last three to four decades has had serious challenges and consequences particularly on urban housing. Increasing urban growth in Sub-Saharan Africa means that providing housing and other services for urban residents, especially the low-income, will be a major issue for urban managers and governments. In Ghana, there is severe shortage of adequate and affordable housing for most of the urban population especially the low income groups. Households continue to provide their own housing through other strategies. These households produce housing through self-help approach - the construction of houses by private individuals for their own occupation mainly through incremental housing strategies. . The Government of Ghana has recognized the significance of this type of housing strategies but it is faced with monstrous task of how to clearly articulate and refine the process in such a way that, it can be implemented on a nation-wide basis.

The study examined the characteristics of self-help housing developer. It further examined how incremental housing development achieves affordability and the effects of land tenure, infrastructure and financing on the incremental housing process. The study employed quantitative and qualitative methods of data collection from both primary and secondary sources. Questionnaire survey at household and institutional levels, key informant interviews and Focus Group Discussions were some of the techniques used to collect the data. The study revealed that progressive housing developers fall within the income category of GH¢100.00 and GH¢300 a month with majority employed in the private informal sector of the economy. The main source of financing housing development is personal savings and because of this, the building process takes between 5 to 8 years to complete the core house.

The physical characteristics and conditions of incremental houses depend on the income levels of the developers/home owners. The very poor low income families start the

process of home acquisition with less permanent materials of constructions – mud and swish constructions with thatch roofs. This gradually gives way for more permanent building materials as the income levels rises.

In the light of these findings, it is recommended that the Tamale Metropolitan Assembly partner with microfinance institutions like the MASLOC to introduce innovative housing finance of housing microfinance to provide phased small and affordable loans to help self-builders acquire land and construct houses. The Assembly in conjunction with its development partners could set a revolving loan fund that with the object of providing affordable housing finance to the low income groups. Though the market base housing microfinance has been proven to successful, it has also been criticized of charging high interest rates. The Assembly in conjunction with the Regional Lands Commission and Town Country Planning Department should embark on vigorous educational campaigns to educate developers on the need for land registration and building permits and the process that are involved. Besides, The Public Works Department (PWD) of the Metropolitan Assembly should educate prospective house owners on local building technologies that have been developed in the country.

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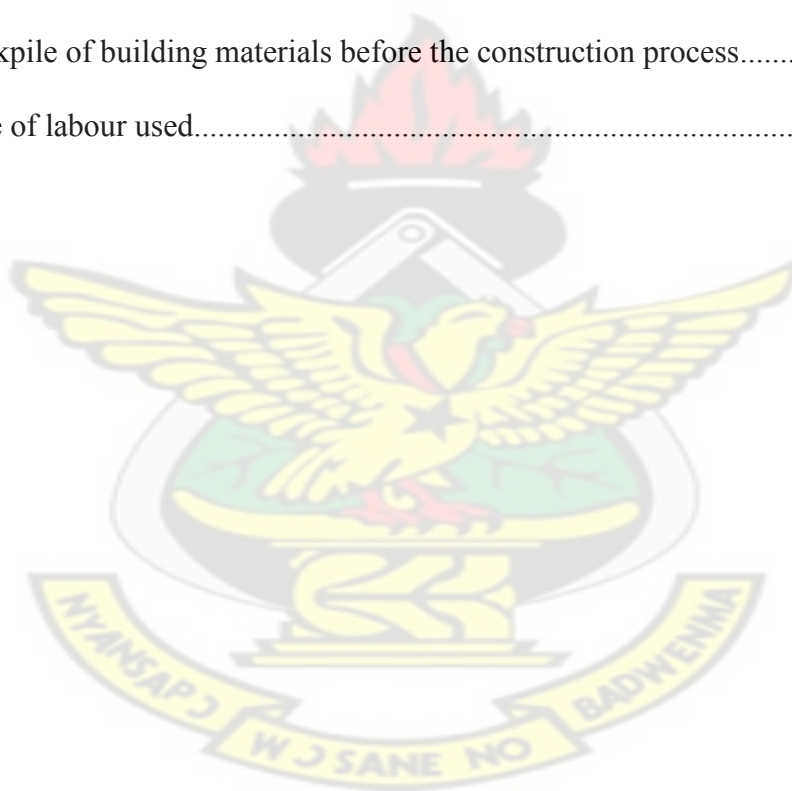
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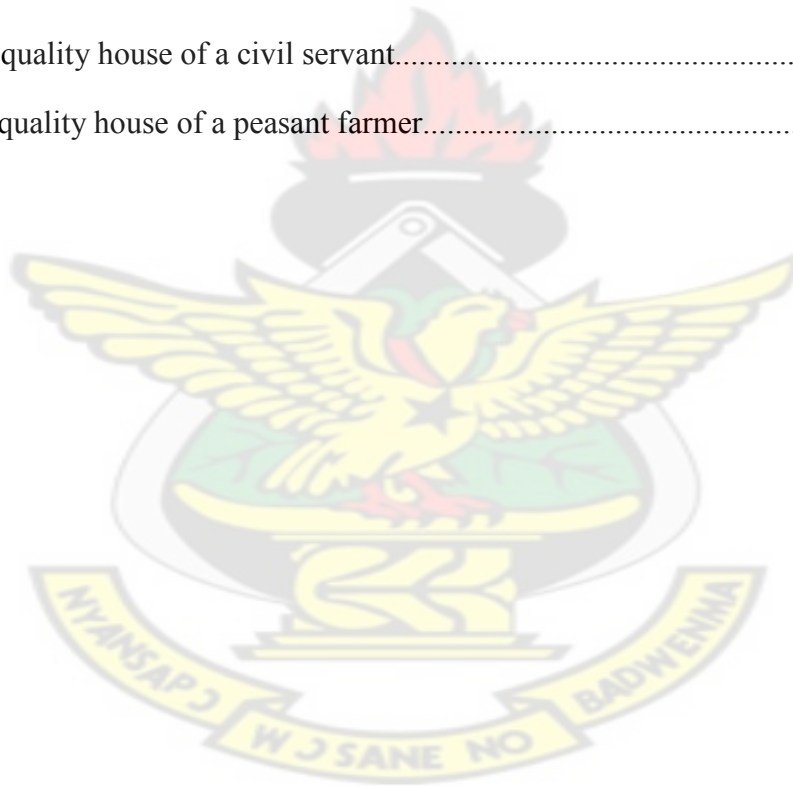
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LIST OF ABBREVIATIONS AND ACRONYMS

CHF	Cooperative Housing Foundation
CLS	Customary Lands Secretariat
DA	District Assembly
GDP	Gross Domestic Product
GHFA	Ghana Housing Finance Association
GOCH	Government of Chile
GSS	Ghana Statistical Service
LMI	Low Income Families
MINVU	Ministry of Housing of Chile
MWRWH	Ministry of Water Resources, Works and Housing
PHP	Progressive Housing Programme
PSBO	Planning, Servicing, Building and Occupation
PU	Progressive Unit
OBSP	Occupation, Building, Servicing and Planning
SERVIU	Servicio de Vivienda y Urbanizacion
UNCHS	United Nations Centre for Human Settlement
UN-Habitat	United Nations Habitat Programme

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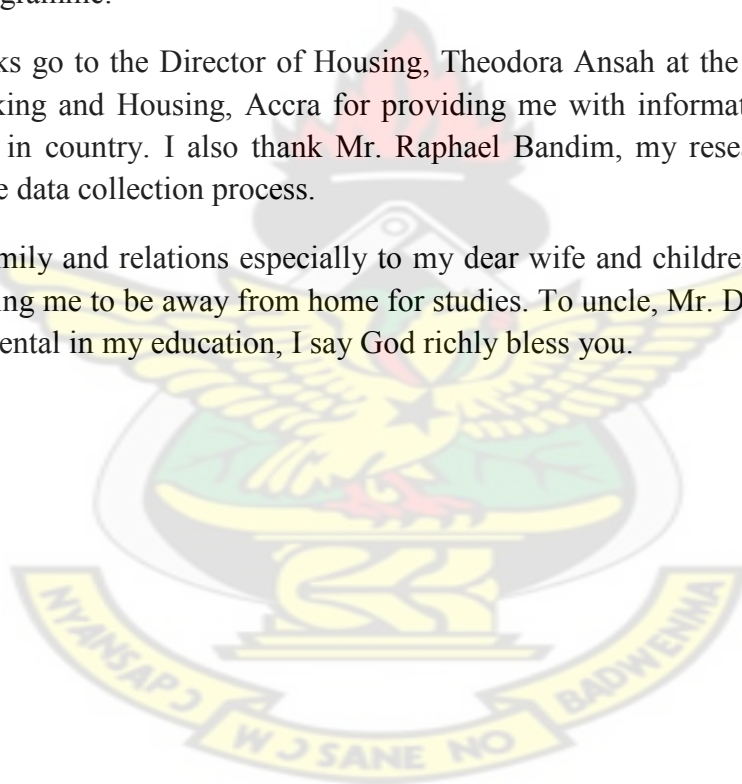
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CHAPTER ONE

INTRODUCTION

1.1. Background

Rapid population growth in developing countries and cities around the world in the last three to four decades has had serious challenges and consequences particularly on urban housing. UN-Habitat in 2003, described this problem as particularly worrying as it constitutes a crucial element that affect the long-term outlook of humanity (UNCHS, 2003). Housing is increasingly becoming a scarce commodity in many cities in the developing world because this rapid population growth concentrates in cities. In 1996, it was estimated that, about 100 million people are homeless in the sense that they live in insecure or temporary structures or in squatter settlements (UNCHS, 1996b).

UN-Habitat (2011), estimates that between 2000 and 2030, Africa's urban population will increase from 294 million to 742 million. Increasing urban growth in Sub-Saharan Africa means that providing housing and other services for urban residents, especially the low-income, will be a major issue for urban managers and governments. This is a daunting prospect, given that most African states are currently unable to deal with the housing needs of the existing urban populations.

Low – income groups housing needs in urban areas of Sub-Sahara Africa have often be relegated to the background because, they are unable to stand the stiff competition generated by market forces. This competition drives up the cost of housing so that the most minimal standard of formal sector housing is unaffordable to the low – income. For example, according to UNCHS (1996), low-income households spent more proportion of their income on housing than upper-income households and that the low-income groups have diversity of demand for housing. This diversity arises from the fact that the low-income groups may have nothing to spend on housing because all their income is spend on daily necessities (basic

needs). Therefore how much income is available for housing affects their demand for housing.

Besides, it is often difficult for low-income households to access housing finance in order to build or buy formal housing. Housing developments designed for low-income or no-income households are often “hijacked” by middle-income buyers, who have easier access to finance. This is because there is also a shortage of available housing for this section of the urban population (UN-Habitat, 2011). In the absence of appropriate housing finance models, the low-income households have consistently relied on informal sources of funds to be able to build their dwellings. These include individual savings, informal loans from friends and relatives, remittances from relatives abroad and disposal of any asset they have (Stein and Castillo, 2003). For this reason, they invest in housing production incrementally which reflect their financial capabilities with regard to cash flows and income levels.

In Ghana, several years after independence, the state is yet to develop systems that can provide alternative housing solutions for all income groups. Adequate and affordable housing continue to be an illusion for many Ghanaians. Household continue to provide their own housing through other strategies. Housing production in Ghana is largely driven by individual households rather than government or real estate developers. It is estimated that, about 90% of the housing stock in Ghana is produced by private individuals (Ministry of Works and Housing, 2000). These households produce housing through self-help approach - the construction of houses by private individuals for their own occupation mainly through incremental housing strategies. These strategies depend much on the income level of the household. Housing provided through the self-help approach is regarded as informal in spite of the fact that it is often considered being advantageous to the low income. It offers an affordable option, economic flexibility, autonomy and more space. The motivating factor for self-help housing can be said to range from the urge to own a house, on the one hand, to the

underlying basic problem of lack of alternative on the other. Therefore for the low income groups, the self-help housing strategy is seen as a solution to low-income households housing needs. Turner (1967) notes this type of housing development offers certain advantages. For instance, it is adapted to the changing needs and circumstances of its occupants. It is improved over time when household income improves, and above all, it allows for community solidarity and mutual help and owners have the autonomy of the design and management of their housing units.

1.2. The research problem

In spite of the fact that, majority of the housing is produced informally by the private informal sector, the involvement of this sector, especially the low income households themselves, in providing their own housing is hardly addressed in Ghana's Housing Policy. Yet, the low income in urban Ghana continues to provide their own housing in a variety of ways and circumstances that are not recognized by policy makers.

The Ministry of Water Resource Works and Housing do not have adequate information on the conditions of these informal housing development and housing needs of the low – income groups. Thus, the ministry fails to plan for an inclusive approach to housing that accepts the right of poor people to live in good conditions in the city. Furthermore, the unequal power relations within civil society lead to the skewing of public and private housing development in favour of meeting the needs of more powerful groups in the city (UN-Habitat, 2011).

Therefore, the low income groups continue to perpetuate this self-help housing in an unguided manner. Ferguson (2003) notes that, if self –help housing are unsupported and unguided as is typically the case, it suffers from severe drawbacks. Ferguson further notes that, fixing these neighborhoods create much greater public and private costs than if these areas were developed formally in advance. The regularization of these areas usually requires

re-planning them to create space for infrastructure, community facilities, and to rationalize the shape and size of individual sites. Hence, this process usually involves re-locating 5–20% of residents—a highly costly process. Putting in basic infrastructure—roads, drainage, sanitation, and water—costs 2–4 times the amount of these services in new development.

The economic reason for the self-help housing development process is primarily the lack of access to capital. Land developments and housing production is capital intensive and access to continued flow of capital is necessary to ensure that land development projects are complete on time. Inadequate financial resources on the part of developers have fuelled the self-help building practices such that housing projects are often started and improved gradually as and when funds become available to the developers.

In spite of the apparent affordability of this approach to housing and also the contribution of this type of housing to the total housing stock in the country, very little has been done by government to address the problem. There is lack of co-ordination in the self-build housing process as an alternative form of housing provision. This often leads to waste of land and capital being locked up in uncompleted housing projects. Again, inadequate knowledge of sound building practices on the part of self-help developers often leads to poor quality of houses. This results from the inability of developers to seek technical advice on material usage which may lead to the developer selecting poor quality materials due to constrained budget.

The Government of Ghana has recognized the significance of this type of housing strategies but it is faced with monstrous task of how to clearly articulate and refine the process in such a way that, it can be implemented on a nation-wide basis (Ministry of Works and Housing, 2000). It is against this background that, the study seeks to investigate the characteristics of self-help housing process and which aspects of the process can be refined to

ensure its formalization and acceptability as an alternative affordable housing solution for the low income.

1.3. Research objective

The study seeks to analyze the characteristics of self-build housing strategy in the Tamale Metropolitan Area with the view to refining and integrating it into the overall national housing policy framework.

Specifically, the study seeks to investigate the following;

1. Examine the characteristics of the self-build houses in relation to the household characteristics
2. Analyze how self-build housing approach achieves affordability for the low income groups
3. Examine the effects of land tenure, infrastructure and financing on self-help housing development
4. Recommend appropriate strategies for refining the process to ensure its integration into the national housing policy framework

1.4. Research questions

1. How do the characteristics of house owners influence the self-help housing development process in the Tamale Metropolitan Area?
2. How does the self-help housing approach achieve affordability for the low income groups?
3. What are the effects of land tenure, infrastructure and financing on self-build housing development with the Tamale Metropolitan Area?

1.6. The scope of the study

The study is restricted to low income housing development, specifically self-build housing development. It looks at the strategies of self-build housing. It focuses on the characteristics of self-build housing developers and the process in relation to the household characteristics. Geographically, the study covers the Tamale Metropolitan area in the Northern Region of the Republic of Ghana.

1.7. Justification of the study

Housing deficits in developing countries are overwhelming especially in urban areas. These deficits are exacerbated by rapid urban population growth and low expenditure on public housing. The trends are that governments alone are unable to provide public housing especially for the urban population due to inadequate funds. These housing deficits affect the low-income groups more. The diminishing role of the governments in public housing delivery have led to a situation where housing production continue to be dominated by the private sector. Recent studies on urban housing provision in developing countries indicate that most of it will be provided through the individual effort of people to develop their own houses. In Ghana, it is estimated that 90% of the housing stock is provided by private individual mostly through self-help approach. I am therefore motivated by fact the age-long self-help approach to housing continue to offer housing solutions to urban residents especially the low-income who are not able to purchase completed housing units; even though, it continues to received little support by government.

Tamale was selected as study area for two reasons: first, the prevalence of traditional mud and swish building in and around the city which gradually gives way to more permanent structures with modern building materials; second, the relative absence of real estate companies which develop housing estates for people who can afford. The study will provide

in-depth information on the household characteristics of self-help developers and the processes involved in this approach to housing delivery. This information would help government on the best possible alternative of refining the process of self-help housing development to increase housing affordability. Information would serve as a guide to developing affordable housing programmes for the low income houses in the country.

1.8. Organization of the study

Chapter one presents the introduction and background to the study, the statement of the problem and the study objectives. The research questions, scope, Justification and limitations of the study are also discussed.

The Chapter Two reviews literature on low-income groups and affordable housing approaches in developing countries. The Chapter three explains the research methods and methodology. Chapter four presents survey results and analysis of Data. In chapter five the findings, recommendations and conclusion of the study are presented.

1.8. Limitations of the study

In Ghana, information regarding transaction on property is often shrouded in secrecy. This became even more difficult when the current administration is trying to enforce the rent tax. These problems emerged during the data collection process as many property owners were not prepared to disclose information about their properties for fear of being taxed. However, the diverse approaches to data collection and analysis, offer the information obtained a great degree of reliability.

CHAPTER TWO

LOW INCOME HOUSING POLICIES AND THE CONCEPT OF SELF-HELP HOUSING

2.1. Introduction

This chapter discusses low-income housing policies and approaches in development countries. It further defines who the low-income groups are and their housing needs. It discusses the concepts of housing affordability in relation to low-income groups. It examines the affordable housing approaches and strategies adopted by the low-income in order for them to survive the open market competition for housing. Specifically, it discusses the concepts of self-build housing strategies –incremental housing. Finally, it discusses a case study on how governments can focus attention on the contribution made to solving the housing problem by the informal construction activities of households through the self-build approach.

2.2. Low-income housing policies in developing countries

Making housing accessible all has been a difficult task for governments of developing countries. There has been changing discourses on the provision of low-cost housing targeted at the low/moderate income households especially those living in urban areas. At one point, the dominant public policy on low-income housing from 1950 to 1972 was based on the state's role of providing public housing in the form of permanent construction units such as apartment blocks. This type of policy was 'lifted' from industrialized countries as a result colonial influence and was intended to replace squatter settlements in developing countries (Pugh, 1994). This colonial policy on low-income housing which was transplanted in developing countries did not pay due regards to the differing context and reality of low-income housing in these countries but rather was based on the assumption that public housing

would be affordable, effective and eventually succeed in eliminating the insanitary conditions of squatter settlements (Pugh, 1994).

However, the reality of housing development especially by low-income households in developing countries was that, it was out of necessity that they found shelter in squatter settlements (Turner, 1967). Turner who is an authority in low-income housing especially on self-help housing analyzed the value of self-helping and argued that housing should be seen as a verb and that squatter settlements were a solution of low-income housing and not a problem (Turner, 1972a). Turner and other writers advocated for the site and services and *in situ* slum upgrading schemes to facilitate access to housing by the low-income households. This marked the beginning of the World Bank intervention in housing policy development in developing countries and international housing politics.

Between 1972 and 1983, housing policies were directed at delivering affordable land and housing, cost recovery and replicability (World Bank, 1993). The focus was on affordable housing and infrastructural standards, provision of tenure security and internal cross-subsidies through site-and-services schemes for project beneficiaries. The intention was to make housing affordable to the low-income households with no payment of subsidies by the government as compared to the public housing strategies. To achieve these objectives, housing standards and methods of construction were to be set within the affordability level of low-income households so that affordability become the main determinants of housing standards rather than technically driven building standards. The cost recovery was to ensure that users paid for the cost of the projects so that this could reinforce affordability. Cost recovery was a way of avoiding government subsidies which was thought to be unaffordable and therefore not sustainable by governments in developing countries. Besides, cost recovery was to hold financial capital invested intact so as to enable the replicability of housing

investments projects which would aid in eliminating squatter settlements (Pugh, 1994). In a nutshell the overall principle of this policy was affordability-cost recovery-replicability.

The state's role was on direct provision of land, housing and finance so as to facilitate the progressive development of housing by beneficiaries (World Bank, 1993). In other words, the role of government was limited to facilitating household progressive housing construction through self-build or contracting of building services from formal and informal markets. The role of government came in the form of infrastructural provision, providing tenure rights to beneficiaries and initiatives that imbued social planning elements in low-income settlements (Pugh, 1994).

The period between 1980 and 1989, the housing policy focus was to create self-supporting financial intermediaries which will make mortgage loans to low and moderate income households, and to reduce and restructure housing subsidies. In other words, this policy was on strengthening institutions – institutional reforms by improving institutional financial performance of government agencies and departments that were involved in the provision of land, infrastructure and housing. Its emphasis was on interest rate reforms by enhancing resource mobilization and improving mortgage instruments design so as to make housing finance available to the low and moderate income households. It also sought to redesign housing subsidies and to make more viable (World Bank, 1993).

In effect, housing policy was to address the issue of housing finance by channelling loan assistance through housing finance systems. The emphasis of this policy was towards the economic factors in housing finance and macro-economics (Pugh, 1994). The role of the state was to provide housing finance through its public institutions and rationalize housing subsidies. This was to be done through reduction of subsidies; improve targeting of subsidies and moving from financial to fiscal economic management by ensuring macro-economic

stability. This led to the cutting down of government spending through the World Bank structural adjustments policies.

By 1990, the World Bank revised its housing policy to focus on developing integrated policy and the stimulating of demand, facilitating supply and managing the housing sector as a whole. The objectives of this policy were to create a well-functioning housing sector and to ensure general economic growth in the national context. The idea behind this was to ensure that well-functioning housing sector serve the need of consumers, producers, financiers, local and central governments. These will enhance economic development, poverty alleviation, and supports sustainable environment (World Bank, 1993). Governments were to stimulate demand through developing property rights by making property rights tradable and enforceable. This was to be done through land registration and regularization of insecure tenure which should go along side with infrastructural provision and improvement in squatter settlements in a cost recovery manner as well as privatize publicly owned housing (World Bank, 1993).

The state was to play an enabling role in facilitating the provision of land and housing by the private sector. The role of government was also to ensure coordination of sectors and macro-economy policy. Enablement became a key concept concerning the role of government in this policy. Pugh defines enablement

As providing the legislative, institutional, and financial framework whereby entrepreneurship in the private sector, in communities, and among individuals can effectively develop the urban housing sector. (Pugh, 1994)

Pugh adds that

The operational form of enablement will often take the form of partnership arrangements joining together government policy makers, firms and market entrepreneurs, nongovernmental organizations (NGOs), government agencies, community-based organizations (CBOs) and households. (Pugh, 1994)

Therefore, the main role of government in this policy was to create the enabling environment that will attract private sector investment in housing and create opportunities for public-private sector partnerships in housing production and delivery

This policy also sought to encourage governments to develop mortgage lending which would go with overall financial sector development. Besides, it encouraged governments to re-examine subsidies by rationalizing subsidies through well-targeting and granting subsidies only where it deemed necessary and where there were no alternatives. In addition, as part of stimulating demand and supply, governments were to provide infrastructure for residential development, regulate land and housing development and help organized the building industry in a way that will facilitate access to housing by all income group.

Besides, the policy focused on institutional reforms so that government with limited resources will manage the housing sector in a manner that will provide adequate and affordable housing for all. This led to the new institutional economics thinking, new public management and decentralization in many developing countries, all in a bit to introduce effective and efficient management of public institutions to ensure proper management of the housing sector and the overall economic.

2.2. The enabling strategies and self-help housing

The enabling strategy provided the impetus for private sector involvement in housing provision. The intent of the strategy was clear. Governments were supposed to disentangle the difficulties of access to land, infrastructure and financing so that private individuals could take the lead in building for themselves. Initially, government aided public housing were aimed at improving peoples housing efforts with the site-and-services and in situ slum upgrading schemes which were not linked to the overall urban developments. Subsequently, self-help housing became an element of the overall policy which broadens the scope of

housing to wider issues linking housing to financial systems, macro-economic and the whole housing sector development. What this meant is that the role of self-help in housing had to be reinterpreted in nature and context of changing policies context (Pugh, 1994). Again, it is important to state that, low-income housing policy in general has been in transition from project-by-project basis towards linkages to the overall urban development. The focus of the enabling policy was to ensure overall economic development through institutional development.

Apart from the fact that the enabling strategy was to ensure security of tenure, protection from discrimination, and equal access to affordable adequate housing for all persons and their families, it sought to do this through the active participation of the public, private and non-governmental organizations as partners at every level in the housing supply spectrum (McAuslan, 2002).

Again, the provision affordable housing was at the central stage of the strategy. McAuslan indicates that;

“Enabling markets to perform efficiently and in a socially and environmentally responsible manner, enhancing access to land and credit and assisting those who are unable to participate in housing markets” (McAuslan, 2002)

These enabling strategies were soon linked with poverty reduction with the understanding that housing improvement was very essential to achieve better living conditions of the poor. Interestingly, the strategies encourage the market approach to housing where demand and supply determined who could get access to housing. Upon realizing that, the low-income groups could not effectively compete on the market for access to housing, some governments in developing countries reinforced a modified subsidy regime. Therefore the new paradigm in low-income housing development revolved round three thematic areas. These include credit, low-income land development and subsidies (Ferguson and Navarette, 2003).

2.2.1. Low-income land development

Land constitutes a significant proportion of the total cost of financing incremental housing construction process and access to low cost land is very essential in making the progressive housing development process viable. Access to land determines how land is made available for residential development to all income groups. It is conditioned by land tenure which is inextricably linked with historical, cultural, legal and economic factors that affect people's perceptions and behaviour. It is related to location, the nature and distribution of employment centres, transportation and other public infrastructural services (Payne, 2002). Payne argues that for the very poor urban households, their priority is to obtain access to land where they can maximise their livelihoods opportunities and this is usually in prime locations in urban areas where there is very high competition for land and land prices are very high. Payne further posits that, for more established low income households, their ability to cover transport cost influences their decision to construct their dwelling at less central locations in the urban areas and the type of tenure that afford this, becomes an important element for access to services and credit.

To improve the security of tenure for the low-income groups in urban areas, innovative strategies have been adopted by some governments in developing countries and these have been measured by the following criteria. The extent that the strategies enhance the;

- Protection against arbitrary eviction or demolition;
- Encourages investment and housing improvement;
- Allows for the provision of infrastructure and public services;
- Permits market values to apply to property and;
- Allows for owners to leverage equity for credit (Sims, 2002).

In line with these criteria, the Government of El Salvador undertook to reduce land-developments standards and streamline its regulations on land. The government undertook a wholesale reform of its legal and institutional structures of land development, cadastres and property registry. It assessed and required full basic infrastructure before sub-dividing land. These requirements made land affordable for majority of the population (Ferguson and Navarrete, 2003). This reduces the upfront costs, allows for incremental upgrading of this infrastructure and further stimulates low-income housing developments.

Again, residential land development on the urban fringe has been the critical element in the expansion of cities in developing countries and has created many problems in urban growth and developments. Peri-urban land developments have often been developed without planning permissions. In Bogota, Colombia, the local government has targeted the urban fringe land development problem by creating an agency called Metrovivienda. This agency buys large tracts of land zoned as rural or peri-urban. The agency is given the powers of eminent domain to expropriate land and pay a fair market price to the landowner, if the land owner is not cooperating with it. Payments of parcels of land acquired are either in cash or of an interest of the landowner in subsequent development. In reality, the agency pays substantially less for the land than if it was zoned urban land. In addition, the agency applies for permits from government entities and puts in trunk infrastructure, parks and common use areas in conjunction with other planning authorities. Parcels of land with the infrastructure are sold to both for-profit and non-profit land developers which commit themselves to construct housing and sell it at maximum price. The competition among these developers leads to price controls and quality residential developments. Besides, developers are able to pass on the great cost advantages created by the agency from low land purchase cost, large scale, and quick development times to home buyers. To ensure that, the lower income groups

benefit from this, the agency sometimes organized families to access credit from direct demand subsidies funded by the central government (Ferguson and Narvarrete, 2003).

2.2.2. Direct demand subsidies

According to Ferguson and Narvarrete (2003), direct demand subsidies programmes first started in Chile in 1977 in response to the country's tax funded housing programme. Direct subsidies programme deliver up-front grant to low-income households rather than below-market interest mortgage. In Chile, households complement this subsidy by their own equity contribution. The striking feature of this subsidy programme is that, households (i.e. demand) receive the subsidy and can choose different types of housing units at different locations as they would prefer. Hence the direct demand subsidies have the advantage that households can shop around for different housing solutions (Ferguson and Narvarrete, 2003).

Interestingly, direct demand subsidies have spread from Chile to other developing countries like, Costa Rica, Venezuela, and in many Latin America countries. In Africa, South Africa is the best example of implementing this type of subsidy programme. Direct demand subsidies have had substantial impact in providing affordable housing than the conventional housing programmes in many developing countries.

Notwithstanding the substantial impact of direct demand subsidies in Chile and other implementing countries, there is the need to modify this type of subsidies to function well in most developing countries. There is the need for more market mechanisms like credit to reduce funding burden on central governments as many developing cannot afford to bear the cost of subsidies.

2.2.3. Credit: Housing Microfinance

Housing microfinance can be defined in two broad perspectives – product and provider centred perspectives. Each of these definitions determines the approach and characteristics of the financial services provided by microfinance institutions. From the

product-centred perspective, housing microfinance is defined as the provision of financial services to the poor or lower moderate income households to finance their shelter needs with methodologies adapted from microfinance revolution. These methodologies include the basic principles of microfinance – loans at relatively small amounts, at shorter duration as compared with mortgage lending and at par with individual loans of moderate income microfinance clients; market interest rates; the use of collateral substitutes; loans finance shelter needs incrementally to reflect the survival strategies of households; and loans are linked to prior participation in savings or traditional microfinance loan services (Daphnis, 2004). Essentially, it is the application of microfinance principles to housing finance.

According to Daphnis (2004), housing microfinance from the provider-centred perspective, literally encompasses all recognized housing-focused financial services being offered by microfinance institutions which may deviate from the basic principles of microfinance. This perspective allows for product innovation and wide range of housing-focused financial services which will otherwise not fit into the basic principles of microfinance but are necessary to ensure that appropriate housing finance is available for the low-income households to meet their habitat needs. These two definitions describe the approaches to financial service delivery of microfinance institutions engaged in housing and the basic cluster of products being offered by these institutions. Therefore, based on these definitions two categories of housing microfinance providers can be identified. These include: (1) providers that make housing finance on stand-alone basis where all clients irrespective of whether they have prior links with the institutions or not; and (2) those that provide housing finance linked basis to only clients on who have participated in the microenterprise lending of the institution and as such have credit history with the provider (Daphnis, 2004).

Various studies have indicated that many housing microfinance programmes exist in most developing countries (Ferguson and Narvarrete, 2003). These programmes are implemented by NGOs, building materials suppliers, informal land developers, and other private financial institutions. Many more microfinance institutions are diversifying their products to housing microfinance activities and if given the chance, low/moderate income households tend to invent some form of housing microfinance like savings clubs to finance their shelter needs (Ferguson and Narvarrete, 2003).

One interesting development about housing microfinance is that, it funds home improvements and extension projects and reflects very much the manner in which low-income households build – incremental building. It finances housing development in stages according to the major phases in the incremental building process. As indicated earlier one, low-income households try as much as possible to avoid incurring debts and other financial obligations that extend over a long period of time like mortgages because of their survival strategies. Therefore, housing microfinance is well suited for financing low-income housing development. Besides, it helps solve the difficulties encountered by traditional housing finance systems in many developing countries – requirement for regular and permanent income stream, collateral, and legal title to land.

Again, housing microfinance is well suited for developing economies with unstable macroeconomic conditions like high inflation and interest rates, and foreign exchange risks. The combined effects of these normally caused the traditional mortgage to suffer term mismatch associated with long mortgage periods (Ferguson, 2004). According to Ferguson and Narvarrete (2003), ‘shorter - term assets better fit the shorter – term liabilities available in developing countries and substantially reduce, although do not eliminate, the risk of term mismatch’.

Finally housing microfinance will solve the heavy burden of subsidies on government in developing countries. It is a market mechanism that supports low-income households with housing finance in accordance with their income conditions. Therefore, it can reduce and/or replace subsidies in social housing programmes, slum upgrading project and low – income land development subdivision (Ferguson, 2004).

2.3. Definition of low income groups

Low-income groups in urban areas are most often referred to as the urban poor. According to Yeboah (2005), the term low-income is used synonymously with the poor in both academic and practitioner circles, such as the United Nations and national governments. Yeboah notes that, the lack of distinction between poverty and low income is, however, predicated on the assumption that, it is the most convenient even though not the best way to measure poverty. There is virtually no standardized definition for the low-income. The tacit definition which is mostly used in poverty literature and which has been adopted by local financial intermediaries is household daily income of \$1 a day or less. Ghana Statistical Service (GSS), estimates the lower poverty line is GH¢288.47 per adult per year and upper poverty is GH¢370.89 per adult per year. This is the baseline on which income levels are referenced in Ghana. These poverty lines are based on nutrition levels. GSS indicates that individuals consuming levels above the upper poverty line are classified as non-poor (Ghana Statistical Service, 2007).

UN-Habitat (2009) outlines three important dimensions of poverty; as poverty of money, poverty of access, and poverty of power. Poverty of money is where the urban poor lack sufficient resources to afford the minimum acceptable quality of shelter and other services. Within the poverty of money, poverty can further be viewed from an income perspective. Therefore from this perspective, there are two basic types of poverty - absolute poverty and relative poverty. Absolute poverty is defined as the cost of the minimum

necessities needed to sustain human life. Globally, this minimum is estimated at US\$ 1 a day. Relative poverty on the other hand is defined as the minimum economic, social, political and economic goods needed to maintain an acceptable way of life in a particular society. Poverty of access refers to the inability of the poor to access basic infrastructure and services.

The urban poor are quite diverse across regions, countries and even within cities. Urban poverty is multi-dimensional with complex interactive and causal relationships with several manifestations. According to Baker (2008), the urban poor face a number of common deprivations which affect their day to day life. These include: i) limited access to income and employment, ii) inadequate and insecure living conditions, iii) poor infrastructure and services; iv) vulnerability to risks such as natural disasters, environmental hazards and health risks particularly associated with living in slums, v) spatial issues which inhibit mobility and transport; and vi) inequality closely linked to problems of exclusion.

Therefore, in this study, low-income is broadly defined to include groups or households consuming levels between the upper poverty line and the non-poor who have limited access to income and employment, and are often excluded from the land and housing markets as a result of stiff competition created by market forces. As implied in this definition, the low-income are confined to certain settlements in the urban areas or cities as a result of factors such as price levels, the extent of market and commodification of land, and the cost imposed by high-density living without adequate services and infrastructure.

According to Milton (2005), there is a correlation between settlement types and economic opportunities in the urban areas and the larger the area the more diverse the activities. The spatial dynamics of the city/urban area determine where the low-income groups live. Therefore, in certain cities/urban areas, the low-income may live in informal or illegal neighbourhoods in either inner-city or the peri-urban areas. The choice of either of these areas depends much on the tradeoff between the price of land and economic

opportunities. In peri-urban areas, the low-income groups may be able to find affordable which they can secure informally from land owners but inadequate services and affordable transport often pose a challenge to these groups. On other hand, inner-cities areas, the level of services may be high, but the high land prices and overcrowding become the biggest challenge (Miltin, 2005). The typical low-income household Ghana will therefore be someone with a deficiency of income economic capital, assets, housing, power, and even social networks and capital but are able to provide for their own housing solutions through acquisition and building on peri-urban land through self-help strategies.

2.4. Housing needs and demand for low-income groups

Housing need is defined by the UN to include demographic, replacement and vacancy elements (Rakodi, 1992). In other words, housing needs result from population growth and new household formation, overcrowding, and when households are paying more than they can afford for housing. Housing need is considered to be an instrumental need because one cannot fulfil instrumental housing need without meeting our basic need (King, 1999). King distinguished instrumental needs and basic needs. The formal “occurs because of particular ends we choose and the later is what we have by being human”. However, King argues that, need is a relative term and is best defined individually within a particular cultural context and that, if one chooses housing with high level of amenity he must also fulfil his basic need as those high level ones. For example, according to UNCHS (1996), low-income households spent more proportion of their income on housing than upper-income households and that the low-income groups have diversity of demand for housing. This diversity arises from the fact that the low-income groups may have nothing to spend on housing because all their income is spend on daily necessities (basic needs) and therefore how much income is available for housing affects their demand for housing. Again, the decision on how much to spend on housing is influenced by location, size and quality of housing, infrastructure and services and

the level of security (UNCHS, 1996). Therefore, to be able to identify housing need for a particular income group, King suggests the separation of effective and non-effective demand.

Effective demand for housing is the willingness and the ability of household to pay for housing. It is a function of income and therefore, a potential home-owners decision on whether to buy, rent or improve housing is directly related to the following additional factors;

- Income level and income uncertainty,
- The cost of home-ownership (e.g., production cost, financing cost and availability, maintenance cost, taxes, absence of rent risk, etcetera),
- Household wealth or lack thereof (indebtedness),
- Life-cycle factors (migrant status, household composition and phase of household development),
- Housing risk (the variation of house-prices over time) (Hoek-Smit, 2002)

Therefore housing need for the low-income groups may include any of the following alternatives;

- to build a new home or procure a new house
- to repair a deteriorating house
- to extend an existing building or connect it to public infrastructure and,
- to maintain and improve an existing building to retain its value.

These needs call for different financing strategies as the quantum of need differ from one household to the other as well as income levels of the respective households. For instance, those with high income levels might want mortgage finance to purchase a new building because they will be able to afford it while the low-income groups might opt for finance type that will enable them extend or improve their existing building.

2.5. Housing affordability

The concept of housing affordability has been a topical issue in housing policy debates for some time now. In the developed countries especially in the US and UK housing affordability regained currency in the last two decades when concerns were heightened by the growing number of homeless, rising rent-to-income or mortgage-to-income ratios for lower and middle income households. According to Karley (2009) affordability became an issue in housing as countries moved towards a more market oriented housing sector. In developing countries, housing affordability is also gaining currency especially in the midst of rising housing costs and slums development.

Housing affordability is a relative term and tends to have different meaning to different stakeholders in the housing industry. Commentators, analysts, policy-makers and others tend to have a wide range of concepts of affordability. This relativity is an expression of the subjective social and material experiences of people, constituted as households, in relation to their individual housing situations (Stone, 2005). There are several definitions of housing affordability but due to the relativity of the concept the precise definition is at best ambiguous. Conventional indicator of housing affordability is the percentage of income spent on housing. This traditionally has been 30%. In the US, housing expenditures that exceed 30 per cent of household income have historically been viewed as an indicator of a housing affordability problem (Linneman and Megbolugbe, 1992). In Ghana, the draft National Housing Policy document defines housing affordability as the ability of a household to spend up to thirty percent of its annual income on the rent or purchase price of housing (Ministry of Water Resources Works and Housing 2009). This conventional definition of housing affordability presents many problems especially when viewed in the context of formal housing or public housing. According to Linneman and Magbolugbe (1992), the definition does not take into account changes in the quality of housing over time and the actual financial

constraints faced by home-buyers. In addition, the definition ignores the components of housing costs like mortgage interest charges and down payment which determine monthly instalment. Linneman and Magbolugbe further note that, it fails to control locational variations in median income and the mix of homes available for sale and also do not discern cases of high price-to-income ratios or expenditure shares that result simply from changing tastes for housing amenities.

Furthermore, the conventional definition highlights the relationship between level of housing expenditure and household income. Other debates on housing affordability are centred on what measure of income should be used. But the issue is what type of income should be use. Is it permanent income or transitory income? The fact is that, in developing countries especially Ghana where majority of the labour force are in the informal sector; it is often difficult to make realistic estimate the income levels. More so, when permanent income is often related to housing consumption – owner-occupation while transitory income is often related to tenure choice – rent-occupation (Linneman and Magbolugbe, 1992).

Other literatures on definition of housing affordability have attempted to define affordability based on residual income or the income that remains once housing costs have been met and whether an individual or household has access to finance in order to purchase a house. MacLennan and Williams notes that;

‘Affordability’ is concerned with securing some given standard of housing (or different standards) at a price or a rent which does not impose, in the eyes of some third party (usually government) an unreasonable burden on household incomes.(MacLennan and Williams, 1990, p . 9)

Bramley also defines housing affordability as;

That households should be able to occupy housing that meets well-established (social sector) norms of adequacy (given household type and size) at a net rent which leaves them enough income to live on without falling below some poverty standard. (Bramley, 1990b, p . 16)

Both definitions have implicit notion of opportunity cost of housing, what has to be foregone in order to obtain housing and whether that which is foregone is reasonable or excessive in some sense (Hancock, 1993). These definitions introduce another dimension into the housing affordability. The two definitions according Hancock appear to say that there is some quantity of non-housing consumption which society regards as a socially desirable minimum. Bramley's definition describes this as a "poverty standard". MacLennan and Williams's discusses it in terms of an "unreasonable burden". Hancock, explains that, it is necessary that non-housing consumption be considered a merit good. Both definitions are also concerned with the standard of housing consumption. MacLennan and Williams speak of "some given standard of housing" and Bramley of "social sector norms of adequacy". The concern with standards of housing consumption also implies that housing is a merit good in these definitions. Although it is strictly necessary only that non-housing is considered a merit good to warrant a social concern with the affordability of housing. The non-housing expenditures are limited by how much income is left after paying for housing. This means that a household is 'shelter poor' if it cannot meet its non-housing needs at some minimum level of adequacy after paying for housing (Stone, 2005). That is, shelter poverty is a form of poverty that results from the squeeze between incomes and housing costs rather than just limited incomes. On this basis, only if a household would still be unable to meet its non-shelter needs if shelter cost were reduced to zero should its condition be regarded as absolute poverty rather than shelter poverty the latter situation being Hancock's "minimal definition of affordability" (Stone, 2005).

The residual income is the income a household has left over after they have paid housing costs. It gives what is in some ways a more accurate picture of affordability than price-income ratios since it recognises that lower income households are only able to afford smaller proportions of their income on housing without facing difficulties. One way of

establishing the “spare” money a household has is to reduce the residual income by an amount they are assumed to need for basic living expenses. This can be worked out by using the formula:

Residual income = income minus rent minus Income Support Applicable Amount (ISAM) plus housing benefit (Stone, 2005)

For housing to be affordable, income should not in principle fall below ISAM even if income support is the only income, and therefore residual income should always be greater than zero. The higher the residual income, the more affordable the housing, in the sense of having some income left over to buy other items. Where residual income is negative, there is a serious problem of affordability. Therefore, the study adapts the residual income definition of housing affordable as the appropriate definition for the low-income housing.

2.6. Self-help housing approach

The conceptual underpinnings of self-help housing approach stem from John Turner’s writing on self-help housing and its influence on the World Bank policies on housing in the 1960s and 70s. According to Turner (1968, 1972), self-help housing was a solution to low-income groups housing needs. Turner argues that, self-help housing is adapted to the changing needs and circumstance of its occupants, it is improved over time when family finances allow, it enables community solidarity and mutual help and above all, the owners have the autonomy to design and manage their dwellings. Turners further added that individual needs, priorities and possibilities are continually changing and that helps to even spread the costs of construction over time. The component materials needed for construction should therefore be left with individuals and households or decentralised local and small scale institutions. According to Turner’s view, large organisation provides standard products which cannot deal with the enormous changing housing needs of the low-income households. The role of government according to Turner was to ensure access to land, building materials and finance.

According to Smets (1999), self-help housing is the process by which shelter is constructed step by step and improved over a period of time in terms of quality and size. Smets argues that, this type of building process depends much on the individual household priorities and available income, and changes in accordance to the family cycle. Cooperative Housing Foundation (2004) defines self-help housing as a household-driven building process for acquiring, extending, improving or servicing a dwelling or group of dwellings over time, and thereby improving the quality of the household members' and maximising their choices of housing design and housing needs. The self-help building strategy is also seen as the process by which low-income households make incremental investments in housing as their income permits (Hansen and Williams, 1998). What is apparent in these three definitions of incremental building is the issue of limited capacity or incomes and hence the only possibility of home ownership for the low-income household is to invest in shelter in several stages (UNCHS, 2005).

My definition of self-housing housing is that, it is a process-based strategy of acquiring shelter over a period of time by individual households whose socio-economic conditions determine the length of time of the process and nature of building. This process involves access to land – purchase and occupation of land whether legally or illegally; the construction of the basic core of building step by step where foundation is first laid, walls are erected and the roof is finally fixed, extensions and improvements are made as the income levels of the household improve and as the household size expands; and dwelling is finally serviced with basic infrastructure also on incremental basis. It includes undeveloped plots which are purchased with the intention to construct housing, uncompleted housing structures, and uncompleted and partially occupied houses.

Furthermore, Ferguson (1999) indicates that self-help building is the only strategy by which the low-income groups can have access to housing or shelter. Ferguson argues that, the

low-income households construct their own dwelling by this building process over five to fifteen years. Home ownership starts with land acquisition through various means ranging from squatting to purchasing or leasing of a plot in informal sub-divisions. Ferguson adds that, if there is no threat of expulsion, household builds temporary structures to protect the land and then upgrade gradually by adding space and increasing quality. However, it is important to note that, incremental building is not only prevalent in illegal settlements, and does not necessary start with temporary structures. The starting stage and the quality of the structures depend much on the financial situation of the builder. The key determinant of the phenomena is the availability and levels of household incomes.

Therefore, from the perspective of formal housing development where completed housing units with all the necessary features are available to owners from the day of occupation, the incremental housing is an inverted version of this formal process of building and financing housing (Greene and Rojas, 2008). Greene and Rojas argue that, while in the formal process, housing is financed with a long amortization period of a mortgage while it is still in use, in the self-help housing process, only the most basic features of the house is available at the time of occupation and the rest is upgraded over time as and when the finances of the household improves. Greene and Rojas concludes that, the incremental housing development is the only option left for the low income households to access housing since their incomes levels are low and the deficiencies of the formal housing production and financing mechanisms have failed to deliver adequate and affordable housing to the low income households. Figure 2.1 shows the self-help housing process.

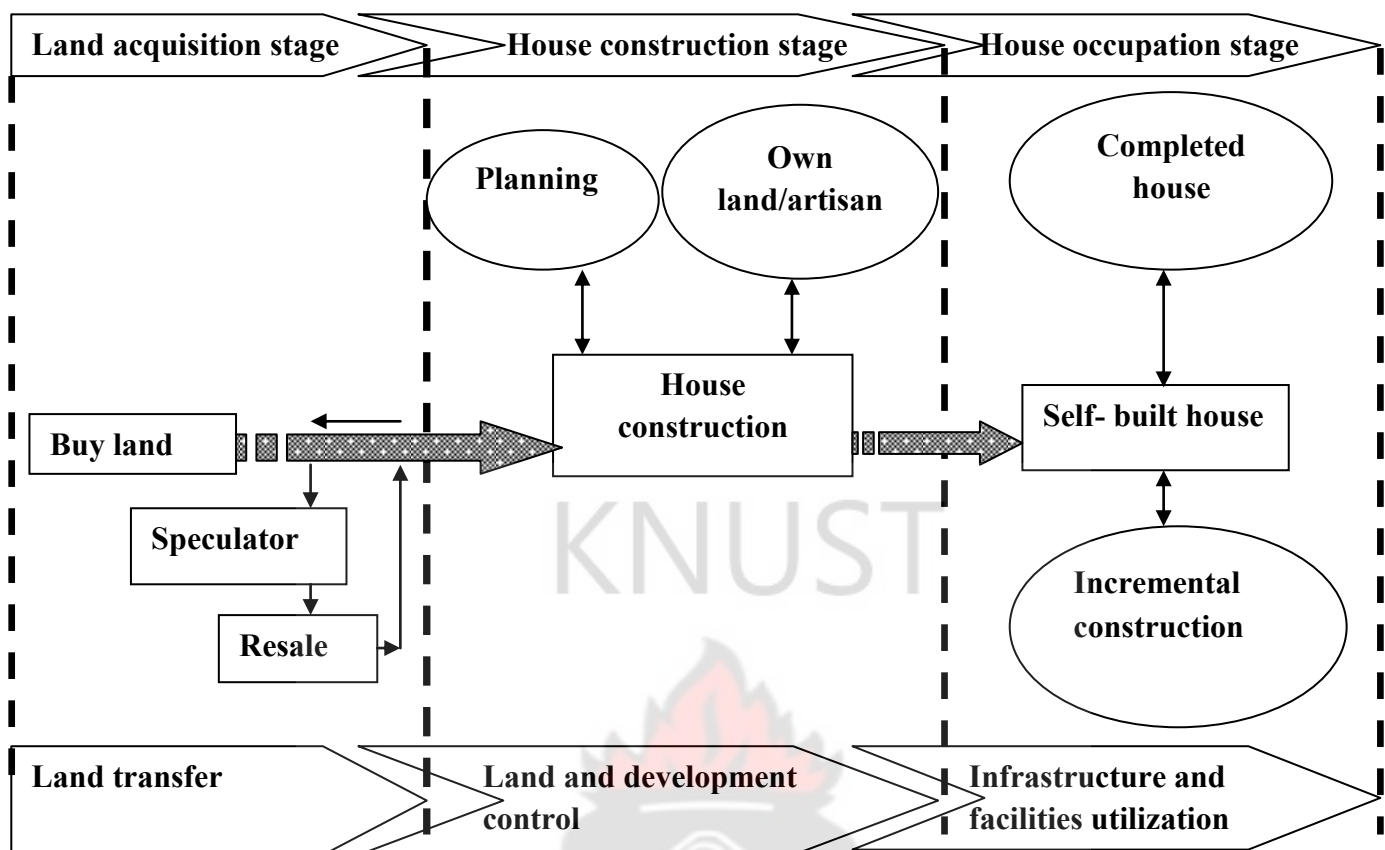


Figure 2.1: The self-help housing development process

Source: (modified from Kamau, 2005)

2.6.1. Phases of the self-help housing development process

According to Greene and Rojas (2004), it is possible to distinguish three phases of self-help housing. These include; access to land, the construction of basic habitable nucleus, and the incremental improvement of the dwelling. Other writers like Hansen and Williams have also argued that incremental housing development takes place in four different non-sequential stages. These stages include: pre-ownership where households rent, share living space with family members and friends or squatting on vacant lands in urban areas; initial settlements where they acquire land either legally or illegal to start constructing basic habitable core units; self-motivated upgrading; and external- shock- motivated upgrading (Hansen and Williams, 1998). However, these stages can conveniently fit into the three phases identified by Greene and Rojas.

2.6.1.1. Access to land

This determines how land is made available for residential development to all income groups. Therefore the first step involves access to land by the low income households' suitable location. Access to land makes it possible for low income families to construct their dwelling and access to other basic services and employment opportunities within the urban area (Greene and Rojas, 2004). Access to land is conditioned by land tenure which is inextricably linked with historical, cultural, legal and economic factors that affect people's perceptions and behaviour. It is related to location, the nature and distribution of employment centres, transportation and other public infrastructural services (Payne, 2002). Payne argues that for the very poor urban households, their priority is to obtain access to land where they can maximise their livelihoods opportunities and this is usually in prime locations in urban areas where there is very high competition for land and land prices are very high. Payne further posits that, for more established low income households, their ability to cover transport cost influences their decision to construct their dwelling at less central locations in the urban areas and the type of tenure that afford this, becomes an important element for access to services and credit.

Furthermore, Greene and Rojas (2004) argue that, the land value constitutes a significant proportion of the total cost of financing incremental housing construction process and that access to low cost land is very essential in making the overall process viable. As indicated above, land prices are determined mainly by location and development potential of the land. The location factor determines city growth and it is influenced by the construction of trunk infrastructure which further determines the supply of serviced land in the urban setting. The development potential of land is influenced by land use and building standards which can either limit land available for development or increase the supply. Because of the great influence of these two factors on land prices especially in central locations in urban

areas, it stands to reason that, low-cost land can only be located at the periphery of these areas where there is lack of infrastructure and other basic social services. This explains why many incremental housing constructions process takes place at the periphery of cities. It is only in few circumstances that incremental housing construction take place in central location and this happens because of illegal occupation of public lands where the occupants do not really pay for the full cost of the land (Greene and Rojas, 2004).

The implication of the above factors is that, urban land markets in developing countries rarely delivers serviced lands for low income families. These households must access land and housing through non-formal and non-statutory means such as illegal land occupation and purchases of illegal subdivided plots. According to Greene and Rojas (2004), secure tenure is not an essential condition for these families in many cases and incremental housing developments continue for many years especially where eviction threats are uncommon. Greene and Rojas concludes that, the main methods which the low income families use to access land and the most usual process of securing land tenure in urban areas is illustrated in figure 2.2.

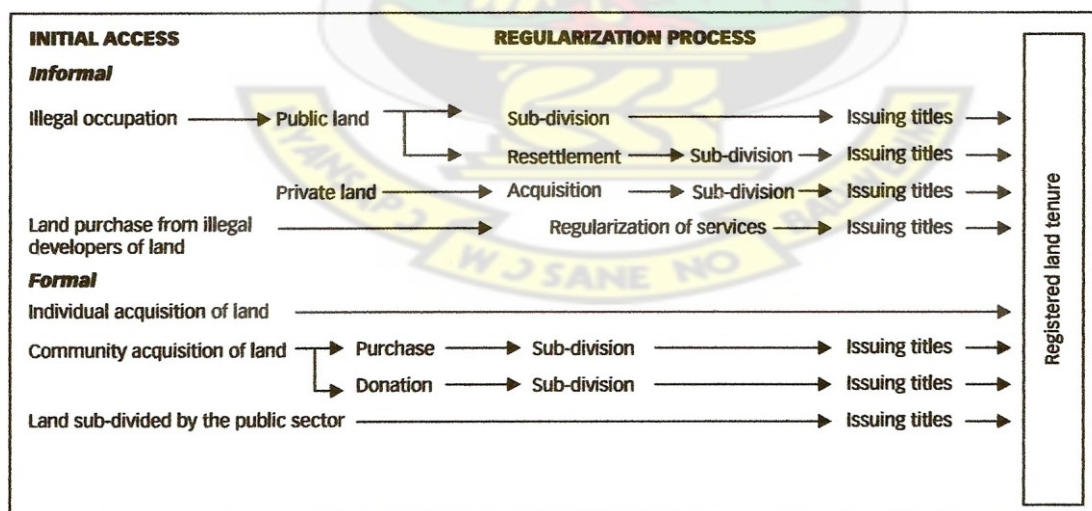


Figure 2.2: Land access and regularization process for low income families

(Source: Greene and Rojas, 2004)

2.6.1.2. Construction of basic housing nucleus

After access to land, low income families begin the construction of the core housing unit. The primary function of this core housing unit is to provide shelter. For the very poor urban dwellers, the construction of the basic housing unit is to protect them against the vagaries of the weather. The materials used for this construction are mostly temporary ones which are not durable. These range from discarded materials such wooden pallets, used iron sheets, card boards to plastic materials. Households within this category use materials like mud/clay, bricks and other indigenous materials which are locally available at affordable prices. Others are able to use burnt bricks and sandcrete blocks and cement. The basic housing units usually lack basic services like sanitary systems, kitchens, electricity, water, and roads. What is peculiar at this stage is that the design and construction is entirely handled by the household who make use of indigenous technology and local building materials (Greene and Rojas, 2004). This basic housing nucleus is used to protect the land from encroaches especially in situations when there are no threats of eviction.

Besides, the construction of the most basic housing unit is finance entirely from person sources and this influences the type of materials used and the type of housing unit. Hansen and Williams (1998) argue that, availability of household income is the critical factor that determines how the basic housing nucleus is constructed. More importantly, these households build the basic housing nucleus to reflect their survival strategies. They try to avoid debts as much as possible and even when it becomes necessary for them to incur debts, they opt for shorter debt periods so that they are able to meet other pressing needs for food, education for children and travel costs (Smets, 1999).

2.6.1.3. Incremental improvement of the basic housing nucleus

When households have finished with the basic housing nucleus and taken possession of it, they expand and improve their dwelling as the family size, priorities and level income

changes. At this phase, they expand their dwelling with little regards to quality as most of the expansions are done in order to meet pressing needs for accommodation to house additional household members (Greene and Rojas, 2004). In other words, the immediate need of the families at this phase is to be able to accommodate all households members without much concern on the quality of housing provided. While this immediate need is being satisfied, the households accumulate savings, stock pile materials, tools and technical skills or skill labour to begin the improvement or upgrading phase. According to Greene and Rojas (2004), this phase is characterised by limited infrastructural services and there is often differing interests between public sector agencies and beneficiaries. That while public sector agencies may advocate for improvement of sanitation services, the beneficiaries are more interested in consolidating their properties and maximum protection against natural risks in case of those on illegally own lands located at precarious areas prone to natural disasters while others might need more privacy.

Greene and Rojas assert that there are homes that have never been upgraded from their original state and the major reasons attributed to this are lack of financial resources for families to be able to acquire building materials and labour to facilitate the upgrading process. Other reasons are that, the tenure status of the inhabitants is not certain and therefore they do not want to risk improving their properties only to be evicted. Besides, women headed households are usually faced with the problems of consolidating and expanding their homes than male headed households. Perhaps, the longest phase in the incremental housing development process is at this stage because it involves improving the quality of the homes once the nucleus is in place and the initial expansion has taken place. It also involves more complex operations and technical expertise.

2.6.2. Components of self-help housing

Self-help housing development process has two main components in the input side. These are monetary and non-monetary components. The monetary side constitute an important source of savings and hedge against inflation. The monetary aspect normally involves access to land and stockpiling of materials such as roofing sheets, door and window frames, water closets, and cement blocks usually stored on site of the project. These form important source of household savings. The stockpiled building materials are also a hedge against inflation which has been rampant in most developing countries (Hokans, 2008).

The non-monetary inputs to the process include their own skills (building expertise and experience, budgeting and planning and their own labour (sweat equity), and social networks like family members, friends, neighbours etc. The contribution of the social networks may include additional labour, knowledge of reliable artisans in the building sector, knowledge on the acquisition of building permits, and recommendations of appropriate building materials and design (Hokans, 2008). According to Hokans (2008), these are invaluable because their quality and quantity can significantly leverage the monetary inputs or even eliminate the need for housing micro-loan.

Hokans (2008) posits that, in order to bridge the gap between the monetary and non-monetary inputs so as to speed up the building process, there the need for housing micro-loans. According to Hokans, housing micro-loans predictable fixed payment on short-term instalment basis, usually go toward the purchase of building materials that cannot easily be stored and the payment of specialized artisans workers. Therefore access to housing micro-loans links the monetary and non-monetary inputs to speed up the building process. The combined effects of the monetary, non-monetary and housing micro-loans lead to outputs like improved housing asset, better credit history, more confident and skilled clients and a better community comprising of citizens willing to pay for basic services. The overall impact is

that, it leads to stronger economy where the economic potential of housing is unleashed through this process. This further leads to the development of local economy through home-based micro entrepreneurial development fuelling the creations of businesses and jobs.

2.6. 3.Attributes of self-help housing

The greatest attribute of this type of housing approach is its apparent affordability. According to Kamau (2005), the main attributes of incremental housing are adaptability, affordability and suitability. Due to the inability of incremental housing developers to make large initial investment, they make temporary and small housing core units which can later be transformed into more permanent one. This mode of building allows developers to spread out building costs, and even though this may not make an incremental house comparatively cheaper, it is an approach that contributes to affordability as self-builders are unable to meet capital guarantees to buy houses or secure mortgage financing.

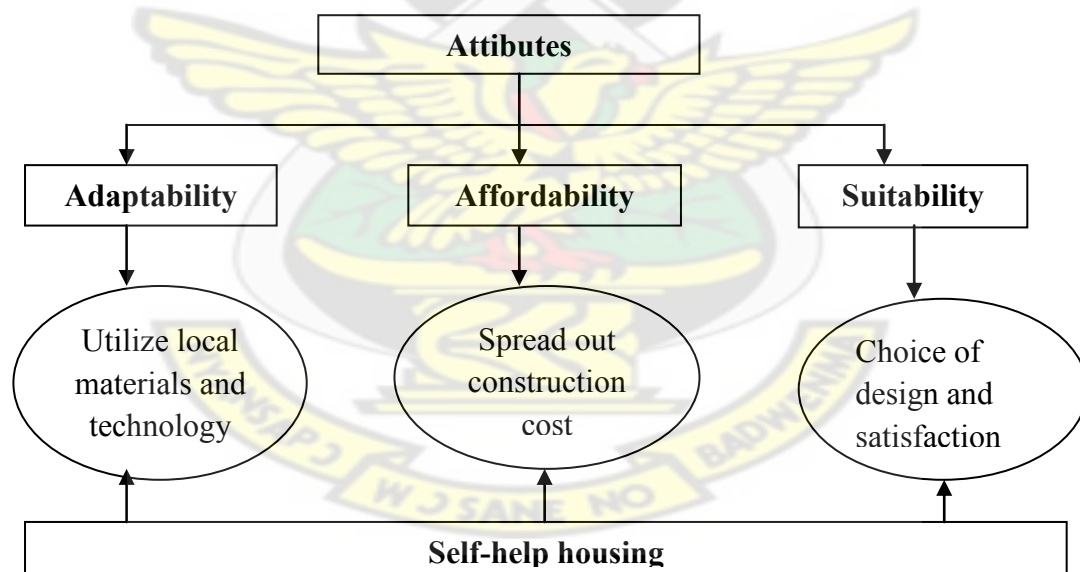


Figure 2.3: The attributes of self-help housing

(Source: Kamau, 2005)

2.7. Case Study - Chile's Low Income Housing Programme

2.7.1. Background to the low income housing programme

Chile's population was estimated in 2008 to be 16 million of which 88% are urban with urbanization rate of 1.3% per annum (www.cia.gov/library/publications/the-world-factbook/geos/ci.html). Chile has a dynamic market-oriented economy characterized by a high level of foreign trade. During the early 1990s, Chile's reputation as a role model for economic reform was strengthened when the democratic government of Patricio Aylwin - which took over from the military in 1990 - deepened the economic reform initiated by the military government. Chile's economy has since recovered in 2006 Chile became the country with the highest nominal GDP per capita in Latin America (en.wikipedia.org/wiki/Economy_of_Chile). It is a democratic country with long period of military rule based on socialist principles. Though a democratic state now, its principles are still rooted in the socialist ideas. The country returned to constitutional democracy in 1990.

Chile had faced severe housing shortages for decades where large number of multiple households living in single sub-standard homes. It is estimated that the housing deficit now range from 550,000 to 600,000 (UN-Habitat, 2009). There are over 4 million housing units which provide dwelling for about 3.7 persons per unit. This figure is slightly lower than the 4.1 figure recorded by the 1992 census, when some 20% of the families were living in dwellings that did not comply with minimum basic standards (Pardo, 2001). It is estimated that the country requires some 82,000 new units a year in order to accommodate current rates of new family formation and avoid a widening of the housing gap. The current levels of new construction are about 135,000 housing units per year. This figure was prior to the recent economic downturn and therefore, the country still need to do more in order to eliminate its housing shortage (Pardo, 2001). Following the housing shortage problems, it was thought that the existing public housing programmes excluded the poor given the strict eligibility

requirements of minimum savings and indebtedness criteria. Therefore, there was the fear that, there will be massive illegal invasions that had been contained by the military government and the need for a housing policy framework to curtail or minimize the effects afterwards.

2.7.2. The Progressive Housing Programme (PHP)

The main housing programme that is targeted at low income families (LMI) is the Progressive Housing Programme. The PHP was managed by the Ministry of Housing (MINVU) and operated by the Ministry's operational arm SERVIU (acronym in Spanish for Housing and Urbanization Services, *Servicio de Vivienda y Urbanización*). Government provided LMI with housing through two different programmes – Basic Housing (BH) and Progressive Unit (PU). Initially the government provided LMI with a basic unit where it was expected that buyers of those units will contribute money and work over time to complete the rough finishing used by government contractors. Finance for the purchase of the BH was provided through down payment by the buyer from savings, a direct government subsidy to complete the down payment and supplementary market-based mortgage where the government assumed the credit risk of the mortgage (Pardo, 2001). The second programme was the PU programme which considered building a house in two stages. The programme is targeted at households with an average monthly income of \$90 or lower. These two programmes faced affordable targeting challenges and is now been replaced by the New Housing Solidarity Fund. This fund is much more market-driven approach that satisfies home ownership demands of the poor and leaves management of housing projects in the hands of community organizations. Subsidies are channelled directly into the fund from the fiscal budget as part the government social protection net. This fund offers funds to organized vulnerable households under the umbrella of special-purpose demand driven community groups formed to design and carry out well-defined housing development and construction

projects. Under this new scheme community organizations, municipal governments, and NGOs address specific housing need of the poor in their communities by engaging a so-called Entity for Management of Social Real Estate designed by beneficiaries to manage their real estate (UN-Habitat, 2009).

2.7.3. National Housing policy framework

The guiding principles of Chile's social housing policy are;

- A progressive direct grant subsidy targeted to lower-income groups.
- A mechanism for the selection of beneficiaries based on needs assessed by the Social Assistance Committees (CAS) survey in Chile and on accumulated contractual household savings.
- A supply of new dwellings generally built and financed by private contractors, that are sensitive to home buyers' demands.
- The state's subsidiary role in financial needs, such as providing mortgages for the poorest households and/or contracting basic housing construction when this is not spontaneously supplied by the market (Pardo, 2001).

According Pardo (2001), the cornerstone of the housing policy of the Chilean government (GOCH) is the promotion of homeownership by providing sizable direct subsidies to low- and moderate-income (LMI) families; Household savings, which are encouraged and normally become the crucial factor in determining those who will receive state subsidies; and financing which is market-rate mortgage loans, which are readily available from Chile's banking sector for moderate- and higher-income households.

The key role played by the Chilean government in ensuring affordable housing delivery is first of all the recognition of home ownership as a key policy choice. The government made it a political priority to make adequate affordable for all as long-term project. All the housing

programme the government introduced are especially targeted at low income families. Therefore, the policy guidelines of the Chilean government are focus on the following;

- Focus public interventions on supplementing private actions and covering for detected market deficiencies in the provision of housing services, mainly among lower middle income households (this defines the so-called “subsidiary” role of the state)
- Apply social progressiveness to state interventions, so that scarce public resources are spent on resolving housing needs of those facing the most severe shortcomings
- Apply household selection processes that ensure that scarce fiscal resources are clearly targeted to and that reach those most in need and
- Design efficient and effective financial instruments so as to make sure that public interventions minimise financial distortions and that fiscal resources are spent achieving stated public goals on social housing—thus making sure that the biggest social impact is obtained from scarce budgetary resources (UN-Habitat, 2009).

2.8. Conclusion

This chapter argued that self-housing housing approach is not a new concept and that international organisations like the World Bank, which provide development assistance to development countries, have sought to influence housing policies in the last five decades in these countries to support this approach so as to ensure the delivery of affordable housing through the peoples housing process. Governments in developing countries have tried one time or other to support the peoples housing process or self-housing through site-and-services schemes but this was done on project by project basis. It further argued that, approaches to affordable housing delivery for the low-income groups have always been by support with market base subsidies. The new emerging trend that is taking the place of subsidies due to limited government budgets is the use of housing microfinance strategies. It has also argued that the low-income groups are people in urban areas are faced with many deprivation which

include : i) limited access to income and employment, ii) inadequate and insecure living conditions, iii) poor infrastructure and services; iv) vulnerability to risks such as natural disasters, environmental hazards and health risks particularly associated with living in slums, v) spatial issues which inhibit mobility and transport; and vi) inequality closely linked to problems of exclusion. Because of these deprivations, the low-income groups housing needs are varied and their nominal demand for housing might be high but effective demand is limited. Therefore, for these groups to be able to affordable housing, they should be able to pay for the cost of housing and still be able to meet their basic needs of life. It then defines housing affordability for these groups by adapting the residual approach of housing affordability.

It further argued that, low-income groups in urban areas build their own houses through the self-help incremental process. This process reflects the households' housing needs of the low-income in relation to their deprivation especially reflecting their limited income status. The length of time of the incremental building process therefore depends on the income levels of the low-income and sometimes can last for generations through various phases. It argued that the main attributes of the incremental housing are affordability, suitability and adaptability. Affordability is achieved through the spreading out effects of construction cost in relation to income availability.

It has also argued that, government can support home ownership drive by the low-income groups through the incremental housing process through concerted policy that aim at targeted subsidies and household savings. It used the Chile as a case study to illustrate this point.

CHAPTER THREE

RESEARCH METHODOLOGY AND CONCEPTUAL FRAMEWORK

3.1. Introduction

This chapter of the research provides details on how the study was carried out. It includes the sampling method, the sources of data and the various tools and techniques employed in gathering the data. The chapter also provides the methods that were adopted in the data processing, analysis and reporting.

3.2. Selection of respondents

The house owner is the main target unit from which data was obtained in the study area. To arrive at this unit, a three-stage sampling was done. First, the Sub-Metropolitan Councils under the District Assembly structure were identified and used as the clusters. There are three Sub-Metropolitan Councils in the Tamale Metropolitan Assembly, namely; Tamale Central, Tamale North, and Tamale South. The second stage of sampling involved selecting communities from each of these Sub-Metropolitan Councils. A total of three communities were thus selected, one from each Sub-Metro. In selecting the communities, purposive sampling was employed. The third stage of sampling was choosing the target units i.e. the house owners. Here, house owners were randomly selected in a systematic pattern in which the researcher identified the main streets in each suburb in north –south or east-west direction. Starting from one end of the street and at the first house on the right, houses were selected on an ‘every other house’ basis. Half the respondents were selected from one side of the street and the other from the other side. This method was chosen because of the long list of the desired sample, making sure that the element of periodicity did not influence the data obtained. Respondents were the house owners who were either resident or non-resident.

The sample size for each community is in proportion to the number of houses in the community as indicated in table 3.1. Approximately 21% of the number of houses owners in

each community was taken. The total number of house owners interviewed in the Metropolitan Area is 400 representing about 2% of the total number of houses in the Metropolis. The figures 3.1 and 3.2 below show the nature of the sampling frame and the study areas respectively.

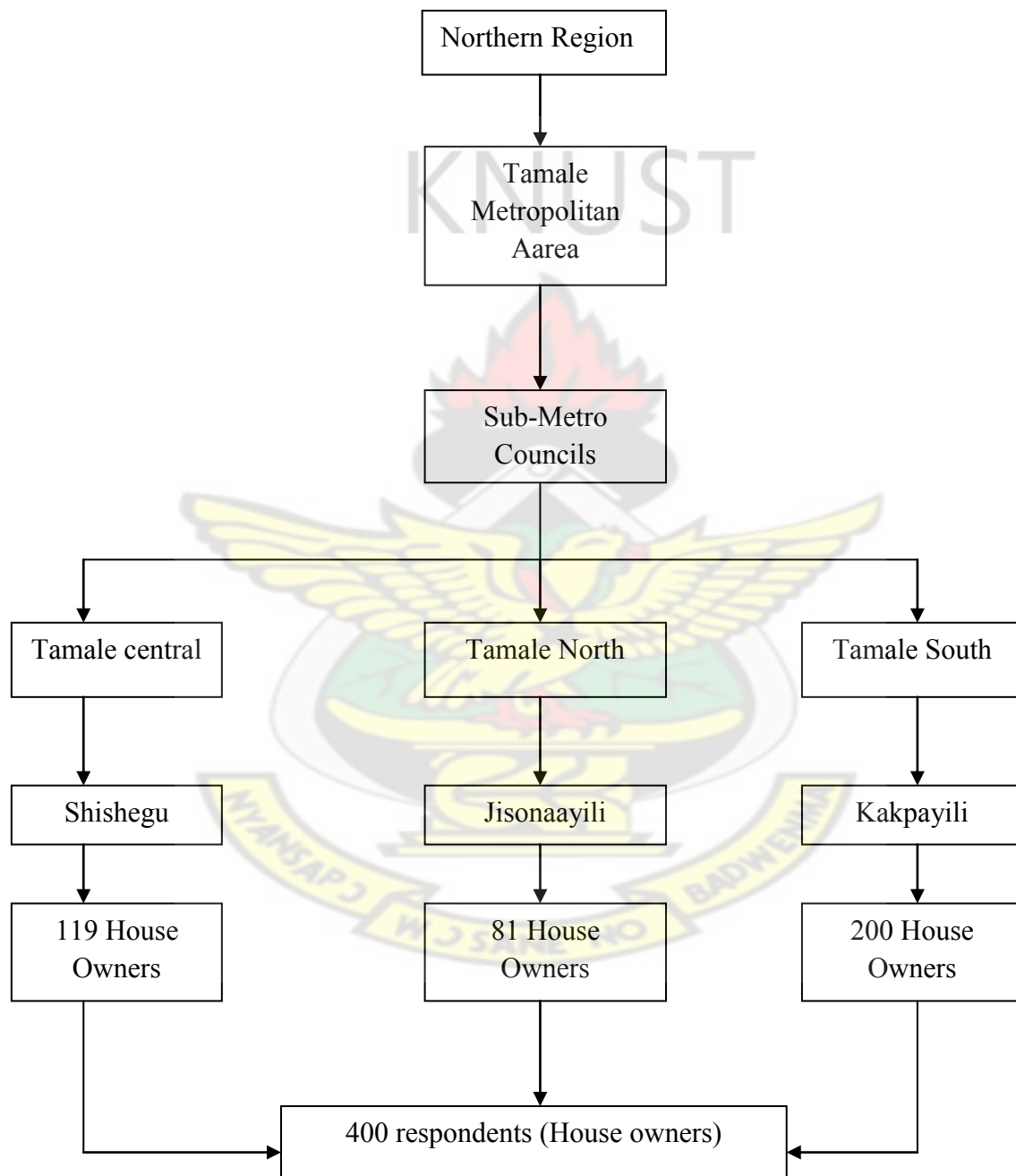


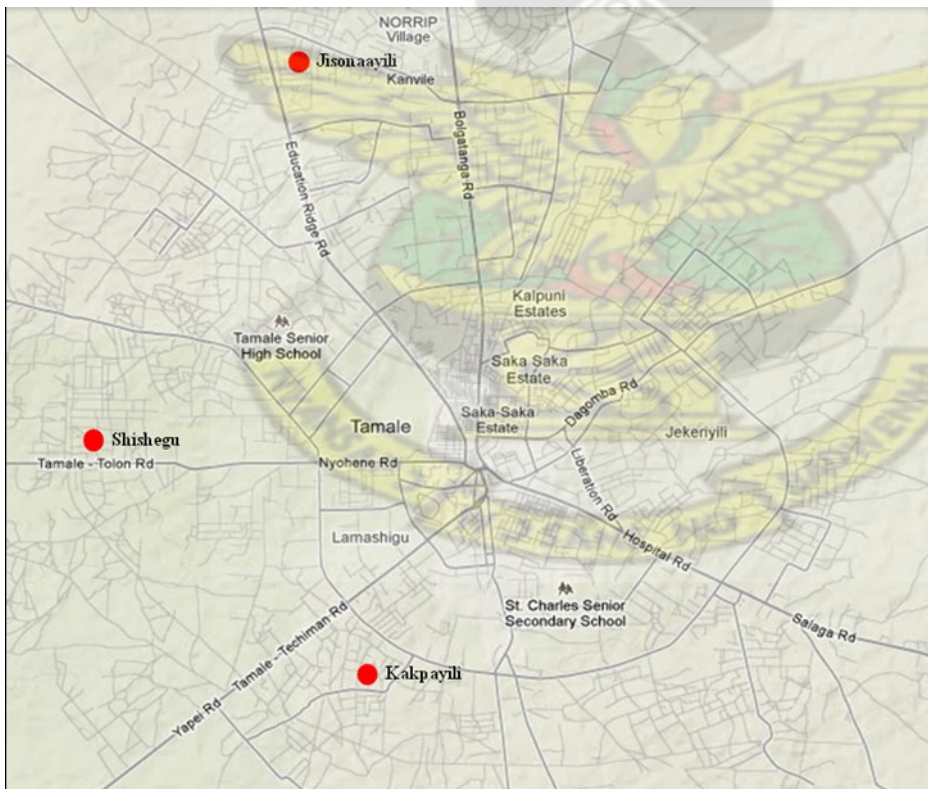
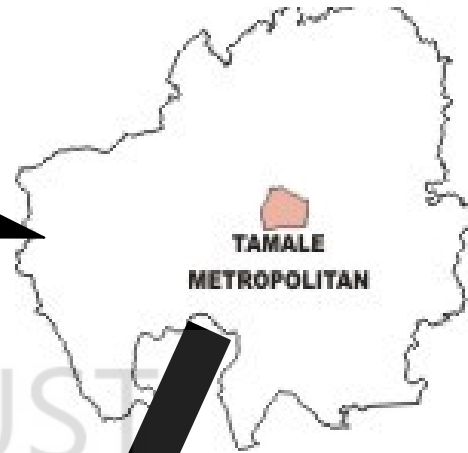
Figure 3.1: Sampling Structure for Data Collection

Source: Author's Construct (2009)

Map of Ghana



Northern Region



KEY

● STUDY AREAS

Source: www.maplandia.com/ghana/northern/tamale/

Figure 3.2: Map showing Tamale and the Study Areas

Table 3.1: The Sampled communities with their respective samples

Selected Suburbs	Total number of houses	Sample Size
Jisonayili	390	81
Shishegu	574	119
Kakpayili	969	200
Total	1,933	400

3.3. Data Collection

In order to arrive at the set objectives of the study, both quantitative and qualitative methods were employed in obtaining the data. A variety of tools were used to collect the data for this research. Both primary and secondary sources of data were consulted.

3.3.1 Primary Data Sources

The study area is the major source of primary data. To obtain this, a number of tools were utilized. These include the following:

- Interviews
- Focus Group Discussion
- Direct observation
- Photography

3.3.1.1. Interviews

The sample units (house owners) in the various communities were interviewed directly using questionnaires (See Appendix ‘A’). The questionnaires comprised mainly pre-coded and a few open ended questions.

3.3.1.2. Focus Group Discussion (FGD)

Three focus group discussions were conducted one in each suburb comprising 8-10 members. Members for the focus groups were selected from the sample of 400 property

owners/developers who were willing and available for the discussions. This data collection technique was used to facilitate interpretation of the data collected through the questionnaires. It served as confirmatory method. According to Steward et al (2007), it is commonly used to obtain general background information about a topic, stimulating new ideas and creative concepts, diagnosing the potential for problems with new programs, and generating impressions of programs and products. Focus group discussions were therefore used to enable the researcher, interpret the results of the survey and identify the root causes of the phenomenon.

3.3.1.3. Observations

The study makes use of observation techniques to collect qualitative data. The aim of using this technique was to be able to take photographs of the various types of self-help housing development in the selected communities. This enabled triangulation of information with other sources. The ‘non-participant’ observation technique was carried out alongside with questionnaire administration and interviews. Participants were informed about the aim of the study for their consent because of the need to get the consent of property owners before photographs are taken. Besides, direct observation was also used because of the need to strive to be as unobtrusive as possible so as not to be bias in the observation process. The researcher took photographs of houses and directly observed physical attributes of the process of self-help. The physical qualities of the properties were translated into visual objects.

3.3.1.4. Problem tree analysis

The problem analysis helps to find solutions to problems by mapping out the anatomy of cause and effect around an issue. It involves diagnosing a problem by breaking it down into more manageable sizes and prioritizing issues. It gives a graphic representation of a problem at the centre with major branches reflecting main causes leading to the problem. This activity stimulates and broadens thinking about potential or actual causes and helps to further

examine causes until a chain of causes leading to root causes are identified (Weiss et al, 2000). Having identified and prioritized the characteristics and problems of self-help housing development from the questionnaire survey, the problem tree analysis was carried out by the focus groups where members identified the causes of the focal problem, the root causes, and the consequences of the problem. Based on this analysis, a problem tree was drawn (see appendix F) indicating the root causes, core problem and the effects. This formed the basis and provided a foundation for government intervention in the self-help housing development.

3.3.2 Secondary Data Sources

The secondary data sources involved an intensive desktop study of existing literature on the subject. Works consulted included: published and unpublished books and theses; journals; news papers; and statutes. The Internet has also been a very helpful source of information for the writing of the thesis.

3.4 Data Analysis

In the analysis of the data, both qualitative and quantitative methods were applied in order to ensure that the results are reliably captured and can stand the test of time. Microsoft Excel software tools such as bar charts, pie charts and tables were used in the analyses of the data. Qualitative data collected through the FGD and observation was analysed by summarizing, describing and interpreting and reconciling with other qualitative and quantitative data. Some of the data collected through observation was presented in the form of pictures.

CHAPTER FOUR

THE SELF-HELP HOUSING APPROACH IN TAMALE METROPOLITAN AREA

4.1. Introduction

This section outlines the characteristics of self-help house owners. It looks at the socio-economic background of house owners. It further discusses the process, funding and affordability and durability with respect to construction techniques and materials of self-help housing.

4.2. Characteristics of self-help house owners

4.2.1. The Study Area

4.2.1.1. Demographic characteristics and housing

The Tamale metropolis accounts for 16.0 per cent of the total population of the region. The metropolis has remained the third largest urban settlement in the country since 1970. The population of the Tamale metropolitan area has increased by almost 2½ times since 1970, from 83,653 to 202,317 in 2000 (GSS, 2005). The population of the city is now estimated at 360,579. The reasons that have accounted for this rapid growth are both natural and migration.

In terms of household headship, Tamale has the highest (20.1%) of female headed household as compared to other districts in the region. The proportion of households headed by females in the region (14.1%) is much higher than the national average (11.0%). Among the districts, Savelugu-Nanton has the lowest proportion of female-headed households 9.4%); West Gonja (16.1%), Bole (16.7%) and the Tamale municipality (20.1%) have figures in excess of 15.0 per cent. The Tamale Metropolis has an average household size of 6.5. Besides, it has the highest (15%) proportion of the total housing stock in the region.

Housing condition in the city is a reflection of the type of dwelling and materials of constructions. There are four types of dwellings that are identifiable in city – separate house,

semi-detached, rooms in a compound, and several huts/building within a common compound. According to the GSS (2005), the city has 14.2% of separate houses, 6.2% of semi-detached, 68.3% of rooms in a compound and 7.4% of several huts/building within a common compound.

In terms of the materials of constructions for walls, Tamale has 10.0% of cement/concrete walls and 48.7% of mud/mud brick/earth of the walls of dwelling. In terms of materials for roof, Tamale has 23.7% of dwelling made of thatch/palm leaf and 70.7% of corrugated metal sheets. This implies that about almost half of the housing stock in the city is made of less permanent building materials for wall construction and more than half of the housing stock is roofed with more permanent materials. Furthermore, with regards to housing ownership, the proportion of household owning their dwelling is 65.5% while 27.3% living in rented accommodation. This implies that more than half of the housing stock within the metropolis is owned by households, an indication of the high inherent desire of people to own the own dwelling units.

4.2.1.2. Economic characteristics

The main economic activities in the metropolis are agriculture, services, commerce and industry. In terms of types of employment activities, majority (53.9%) of the workforce in the metropolis are engaged in sales, services, transport and production. The metropolis has the lowest (29.1%) proportion of workforce engaged in agriculture as compared to other districts in the region and the highest (15.2%) proportion of professional/administrative/managerial and clerical workforce (GSS, 2005). According to the GSS (2005), the employment status within the metropolis indicates that, 70.2% is classified as self-employed while 18.8% are employees. Besides, 12.0% are employed in the public/semi-public sector, 17.3% in the private formal sector and 68.8% in the private informal sector.

4.2.1.3. Land tenure

Land ownership systems within the metropolis are governed by a complex operation of customary, statutory and common law. There are currently two principal forms of land ownership:

- Customary (Private lands)
- State-owned (Public lands)

Customary ownership

This type of ownership is also referred to as communal ownership where the right to use or dispose of user-right over land is governed solely by customary laws of the community. Customary laws in Ghana vary from one community to another and normally reflect the social structures, customary practices and norms. The allodial title which is the highest interest in land is vested in the community, held in trust by social structures like chieftaincy, clan heads and family heads.

Customary land ownership within the metropolis is a reflection of the Dagbon chieftaincy institution. The structure of the Chieftaincy institution in the Dagbon Traditional Area has the Ya-Naa as the King and overlord. There are thirteen Divisional Chiefs under the Ya-Naa. These Divisional chiefs are therefore caretakers of the various paramount areas on behalf of the Ya-Na through special divisions. The King of Dagbon therefore has the prerogative right to dispose any of them when the need arises.

The chieftaincy structure has a direct link with the land tenure and customary land management system in the traditional area. The land mass of the traditional area is considered as on skin, the Dagbon Skin Land. The custodian of Dagbon Skin is therefore the Ya-Na. All lands in Dagbon belong to the Ya-Na in trust for the people of Dagbon. The Divisional chiefs are only managing the land in their respective divisional or jurisdictional area for him. This type of ownership constitutes about 60% of the total land mass of the metropolis.

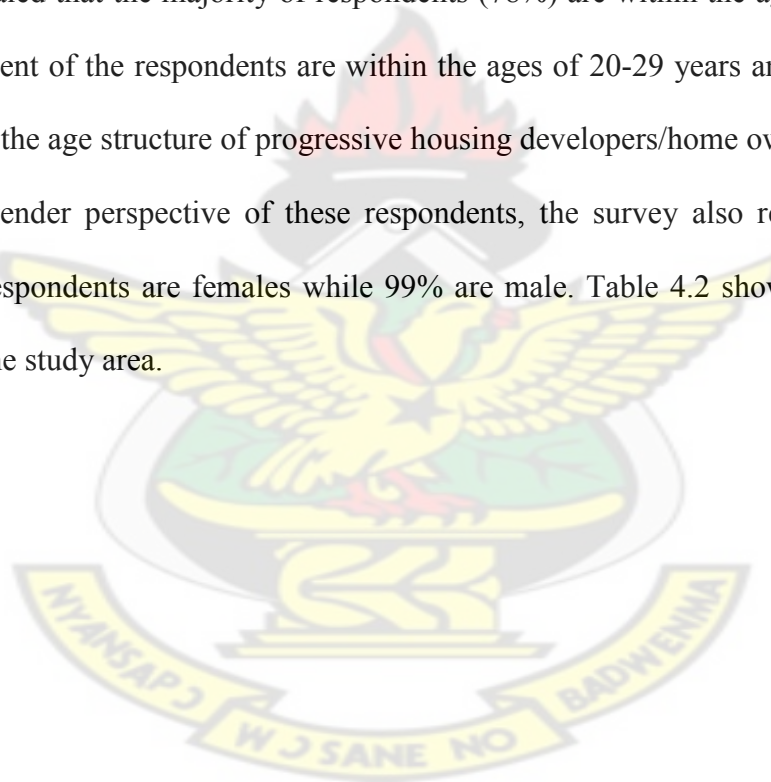
State-owned lands

These are lands that were compulsorily acquired by the state through its powers of eminent domain under appropriate enactments. Under this ownership, the allodial title becomes vested in the state which can proceed to dispose of the lands through leases to institutions, organisation and private individuals. With the metropolis, it constitutes about 40% of the total land mass and covers areas like the Education Ridge, Old Airport, Watherson, part of Ward I among others.

4.3. Socio-economic characteristics of respondents

The survey revealed that the majority of respondents (78%) are within the ages of 40-49 and 50-59. Two percent of the respondents are within the ages of 20-29 years and 70 years plus. Table 4.1 shows the age structure of progressive housing developers/home owners.

On the gender perspective of these respondents, the survey also revealed that one percent of the respondents are females while 99% are male. Table 4.2 shows the gender of respondents in the study area.



4.1: Age Distribution of Respondents

Age (years)	Frequency	Percent
20-29	2	1
30-39	20	5
40-49	129	32
50-59	185	46
60-69	60	15
70+	4	1
Total	400	100.00

Source: Field Survey (2009)

Table 4.2: Gender of Respondents

Gender	Jisonayili	Shishegu	Kakpayili	Total	Percent
Male	80	117	198	395	99
Female	1	2	2	5	1
Total	81	119	200	400	100

Source: Field Survey (2009)

On the educational levels of respondents majority (67%) have not had formal education. Eight percent of the sampled population had secondary/technical education while 25% had tertiary education. Those that had tertiary education were basically civil and public servants. Table 4.3 shows the educational levels of respondents.

Table 4.3. Educational Levels of Respondents

Educational level	Frequency	Percent
Secondary/Technical	30	8
Tertiary	101	25
No basic education	269	67
Total	400	100

Source: Field Survey (2009)

With regards to employment, 18% respondents were gainfully employed in the public sector. Majority of the respondents (83%) were employed in the private informal sector, 85% of who were farmers, and 15% being traders, barbers and butchers. Table 4.4 shows the employment background of respondents.

Table 4.4: Employment Background of Respondents

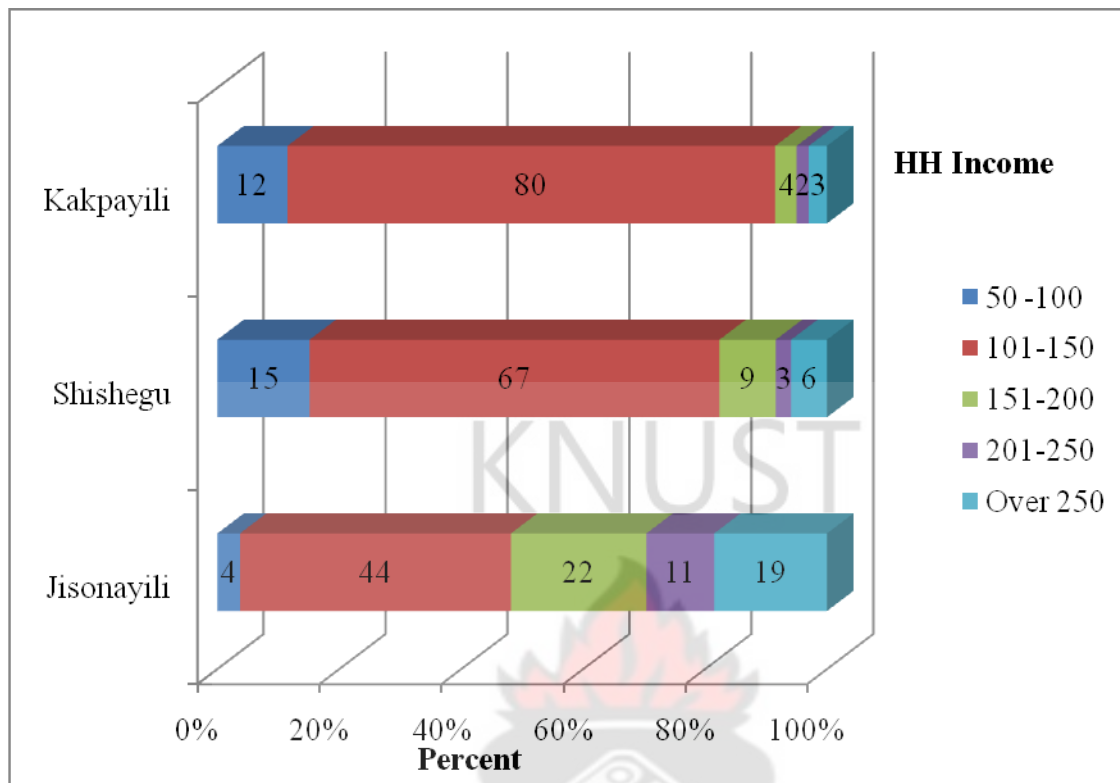
Sector of employment	Frequency	Percent
Public	70	18
Private informal	330	83
Total	400	100.00

Source: Field Survey (2009)

On household incomes of respondents, Kakpayili and Shishegu had more (80% and 67% respectively) respondents earning between GH¢101-150 per month. Less than 10% of respondents in Kakpayili earned between GH¢151-250 per month while 18% of respondents in Shishegu earn between GH¢151-250 per month. Jisonaayili showed different income levels with more (52%) respondents earning between GH¢151-250 and over per month, with 44% earning between GH¢101-150 per month. Less than 5% of respondents earned between GH¢50-100. Chart 4.1 shows the percentage distribution of average net monthly incomes of respondents.

The socio-economic characteristics of the respondents with regards to age structure and gender, indicate that, self-help housing development process are undertaken at the later stages of respondents' active productive years. Even though the process of land acquisition may have happened much earlier than the actual building process, the data indicate that, self-help housing development is carried out at later stages in the personal development of the prospective house owners. Interestingly also, the home ownership pattern is also skewed toward men. The results indicate that more men are engaged in the process than women.

Chart 4.1: Household Income of Respondents



This is an indication of the cultural dimension of house ownership especially in patrilineal society where the man is supposed to be the bread winner and as such culture expects him to own a house. From the societal point of view property ownership raises one social status in a society and therefore men always desire to be recognized and respected in every society and as such often feel that owning one's place of abode would bring him some level of social reorganization.

In terms of educational background, 67% of respondents had no formal education while 25% were active and retired civil and public servants. The educational level has a close relationship with the employment status and income levels of self-help builders. Those with no formal education were engaged in agricultural activities, petty trading and masonry work. They earned minimal incomes (GH¢50 – 150) as compared to those who had formal education and were gainfully employed in the public service (GH¢200 and above). The reasons that can be adduced to why the study areas showed more percentage for those

engaged in agricultural activities could be that, these suburbs were originally used for agricultural production. Land prices were relatively cheaper when the urban population was small. Increase in urban population in the study area is now gradually displacing the agricultural activities of the suburbs and this explains why those developers within the urban transition areas are mostly farmers.

Furthermore, the study revealed that most respondents fall within the income categories of GH¢101-150 and GH¢50-100 especially in Kakpayili and Shishegu. Most of the home owners who fall within these categories were farmers, traders, civil and public servants. Apart from the civil and public servants, the rest were employed in the informal sector. These are the income categories that are not eligible for any mortgage facility and as such would have to realize their inherent desire of home ownerships with these little incomes. It also confirms the assertion by Ferguson (2003), and Greene and Rojas (2008) that most self-help house owners have low incomes which may be irregular depending on the employment status of the individual. More importantly, these income levels are abysmally low and cannot produce any meaningful housing unit and therefore self-help builders would have to phase out the construction of houses to reflect their financial capabilities. The levels of income also determine the quality of the houses built. In Jisonaayili, it was observed the housing quality was high in terms of the type of materials used and also the design of the house because, the income levels in this area generally is higher than the other study areas.

What can be deduced from the socio-economic characteristics of house owners is that, employment and household incomes affect the house construction process and this helps explain why majority of home owners adopt the self-help housing development approach. The implication is that, any programme intervention to assist these developers must consider the fact that, the active period for progressive housing development is within the ages of 40 to 59 years and that any assistance in the form of credit should have its terms and conditions

linked to the age and incomes of house owners. Also a programme intervention is likely to be gender bias because the nature of home ownerships pattern. It should be a targeted programme with clear-cut income and age limits.

4.4. The General Self-Help Housing Process

4.4.1. Acquisition of plot of land and processing of document

The starting phase of the process is the acquisition of building plots which was done usually far in advance of the decision to build. Building plots were bought at relatively cheaper prices when there were little developments in the study areas. Some of the land transactions dated back to the 1970s and 1980s where the price of residential plots could be equated to GH¢3.00. However, the current price for residential plots on the average is GH¢700 depending on the location.

Access land for residential development by house owners is mainly through purchase of leasehold interest from the division chiefs of the Dagbon Traditional Area. Residential plots are usually purchased well in advance of the decision to start development. The survey revealed that plots in some cases were purchase far back in the 1970s. In most instances (90%), house owners purchased their plots from sub-division chief who are customary custodians of these suburbs. The remaining 10% purchased plots from individuals. Besides, in all the three suburbs, developers came from other part of the city to purchase plots in these locations. Ten percent of the developers/home owners indicated they were born in and still reside in the same location where they have developed their houses.

The three selected suburbs that were studied within the study area felt under customary land ownership. Therefore, the land acquisition process follows the skin land acquisition process. The land acquisition process within the study follows a systematic process whereby the prospective developer identifies the custodian caretaker chief of the land. He then conducts further enquiries with the local people or the Gulkpegu Customary

Land Secretariat, Sanerigu Na's Palace, Bamvim Na's or the Nanton Na's Palace depending on which traditional area owns the land or the Regional Land Commission Secretariat. Access to these lands is by negotiation between the chief and his elders on one hand and the prospective land developer. The purchaser of customary land then pays 'Kola' money which traditionally is a token to the traditional authorities but currently this amount represents the market value of land. The market value of the land in the study areas is between GH¢500 to GH¢ 1,500 depending on the location and the services available on site. After payment of the agreed sum, an "allocation note" (a written consent from the caretaker chief indicating the terms of the grant and parties involved) duly executed by the parties with an annexed site plan is issued to the allottee. The next step is to send the allocation note accompanied by a cadastral plan, a statutory declaration and GH¢10.00 to the Gulkpegu Land Secretariat for approval if the land falls within the Gulkpegu traditional area. The secretariat sends a copy of cadastral plan with an enquiry letter to the Regional Lands Secretariat requesting a search to verify whether the land is encumbered or not. If the land is encumbered the application is returned to the grantee. If the land is free from any encumbrances the processing of the grant will continue. The prospective grantee presents the endorsed allocation note with an application to the Lands Commission Secretariat for the preparation of the lease. The caretaker chief and the Ya Na on one hand and the grantee on the other prepare a deed with the normal covenants for execution. The lease is then concurred by the Lands Commission and release for stamping and registration.

In terms of legal ownership (possession of lease documents) of residential plots, only 18% of the sampled population in all the three suburbs had land title documents covering their properties. Eighty-two percent did not have land title documents; some only had allocation letters from custodian chiefs. Table 4.4 shows the distribution of the sampled development with or without land title documents

Table 4.5: House owners who have lease documents on their plots

	Frequency	Percent
Developments with lease documents	73	18
Developments without lease documents	327	82
Total	400	100

Source: Field Survey (2009)

The study revealed that access to land for self-help house owners is mainly by purchase from traditional land owners. Developers normally purchase parcel of land well in advance of its need for development. This confirmed Ferguson (2003) and Greene and Rojas (2008), that the first step in incremental housing development is the acquisition of land legally or illegally. However, acquisition of land in the study areas is done legally through customary laid down principles. This is so because of the nature of customary land ownership in Ghana where every traditional authority is very watchful of its land so as to prevent illegal invasion. However, majority (82%) of house owners have not registered their lands. There are two main reasons that can be deduced from this phenomenon. The first one can be attributed to ignorance and lack of appreciation of the benefits of land registration due to illiteracy and lack of education on the processes of land registration both from the house owners themselves and the land registration institutions on the other hand. It was observed that, in Kakpayili and Shishegu where majority of house owners who did not have formal education did not register their lands. They perceived that the security of tenure from the customary land administration processes is sufficient guarantee for security since they have not experience any problems in terms of disputes since they took possession of the plots. The second reason is that, the cumbersome land registration process and time consuming. Those who had registered their lands complained of the difficulties of getting their leases. Prospective plots owners therefore perceive that, it more expensive to register one's land and

therefore, once they have not be contested for ownership on their plots, they do not see the need to waste their time and money to go through the formal land registration process.

The policy implication is that, already developed customary land can be regularized through encouraging home owners to register their lands free of any penalty. Also land banking can be an effective method of making land more accessible to the low-income groups since they mostly acquire peri-urban agricultural lands far in advance of development.

4.4.2. Mobilisation of funds, design of house and stockpiling of materials and construction of foundation

4.4.2.1. Mobilisation of funds

The next stage of the self-help building process is the fund mobilisation. The study revealed that funds are mobilised through savings. Respondents indicated that the main principal source for financing incremental housing development is individual household savings. This constitutes the first sources of funds which the home owners depend on. In Shishegu, 98% mobilised funds through savings. In Jisonayili and Kakpayili, savings constitute 94% of the sources of funds for self-help housing development. Two percent of the sampled house owners took loans from banks to supplement their household savings in developing their plots. Loan amounts ranged from GH¢200 – 500 with loan terms ranging from two to five years. In other words, the loans were secondary sources of funds to those who had the opportunity and ability to contract personal bank loans. Table 4.5 shows the sources of funds mobilised for financing self-help housing development.

Table 4.6: Sources of funds for financing incremental housing development

	Jisonayili		Shishegu		Kakpayili		
Source of funds	Frequency	Percent	Frequency	Percent	Frequency	Percent	Total
Own savings	76	94	117	98	195	94	388
advance from tenants	0	0	0	0	0	0	0
Assistance from family members	2	2	0	0	2	2	4
Bank loans	3	4	2	2	3	4	8
	81	100	119	100	200	100	400

Source: Field Survey (2009)

Those house owners who took banks loans were salaried workers who applied for personal consumption loans and used to speed up their construction works on their properties. In addition, 1% of the sampled developers had financial assistance from family members. Assistance from family members constitutes another form of funds for self-help development, however, it very negligible.

It was observed that the principal source of financing self-help housing development is savings. The monthly savings as in table 4.6 shows majority of respondents are able to save an average of GH¢50 per month. Sixty percent of respondents in Jisonayili and 59% each in shishegu and Kakpayili are able to save an average of GH¢50 per month.

Table 4.7: cross tabulation of monthly savings pattern of respondents

	Jisonayili		Shishegu		Kakpayili		
Monthly Savings	Frequency	Percent	Frequency	Percent	Frequency	Percent	Total
0 -50	49	60	70	59	117	59	236
51-100	16	20	30	25	63	32	109
101-150	10	12	19	16	12	6	41
151-200	6	7	0	0	8	4	14
201-250	0	0	0	0	0	0	0
Over 250	0	0	0	0	0	0	0
Total	81	100	119	100	200	100	400

Source: Field Survey (2009)

Across the selected studies communities, 27% of the sampled population are able to save between GH¢51-100 per month while 10% are able to save between GH¢101-150 per month. This means that most house owners rely heavily on their savings. These savings are usually used to buy and stockpile building materials either on monthly or quarterly basis. The period of time it takes to save and stockpile building materials also determines how long it takes to complete one phase of the building process. It was observed that, the savings pattern also followed the various stages of the building process. For instance, if one wants to lay foundation and construct walls, he will save money monthly which will be used to get sea sand, mould sandcrete blocks and begin the foundation. But in some instances, the sandcrete blocks are moulded and stored on the site of the project until it is able to complete the entire building structure before actual construction can begin.

In addition, it is clear that, the key financing issues in self-help housing development are the cost of finance. The cost of finance is determined by existing interest rates and the conditions for repayment. In Ghana, banks are reluctant to lend to this category of house owners because the risks associated with this kind of development – irregular incomes and lack good land title. House owners have been left to their faith, with virtually no support from government in terms of finance. The occupation of houses before completion may be interpreted as an indication for lack of appropriate and alternative financing. What is apparent is that, there are no appropriate housing financing mechanisms for incremental house owners. Consequently, the ability of house owners to save for the purchase of a building plot and the subsequent construction of a house determine the duration of the construction process whether completed house unit or built to the state of habitation. Therefore, source of financing and availability is one of the critical factors that affect the self-help housing development process.

The policy implication is that, the existence of specialized housing finance institutions and overall institutional development and restructuring in the housing sector can increase the supply of affordable housing unit. Again, addressing the financial needs of all income categories could lead to strong housing finance institutions and this will further lead to the overall development of the economy. Therefore, the absence of housing finance institutional development has stifled the delivery of affordable housing.

4.4.2.2. Design of house

It was observed that the decision to build also start with the design of the house. The research data revealed that there are two principal housing designs that are commonly used by house owners – the compound house design for multi-family habitation and bungalow design for nuclear family habitation. Those house owners who had the bungalow designs were mainly civil servants who had either retired or were still in active service. The compound house design constituted 98% of the sampled developments. These types of houses had number of rooms averaging 8 rooms per house with an average of 3 persons per room. It provided an accommodation for an average of two households per house. The compound houses are either L-shaped type partly enclosed by enclosed by round thatches rooms or fully completed with only one main entrance as showed in plate 4.1(a) below. The bungalow houses are usually for single family habitation and it is depicted in plate 4.1 (b) below.

Depending on the level and regularity of income and family structure, the choice of design differed from the typical compound style to more of a bungalow or what is popularly known as the ‘self-contain’ house design. The design of the house is also influenced by the motives and intentions of the house owner. It was observed that, those that choose the compound style design had the intentions to rent part of the house while most of those that choose the self-contain design were interested in only residential accommodation for their households.

3.65	3.65	3.65	3.65
3.70 HALL.....4	HALL.....5	3.70 BR.....5	BR.....6 3.70
...4	1.80 BALC.....5 5.63	BALC.....6 4.55	HALL.....6 4.55 PORCH.....3 1.85
	1.80 BALC.....7	3.95 HALL.....7	3.60 BR.....7
	BALC.....8	3.65 HALL.....8 3.90	4.25 BR.....8 1.85

Plate 4.1(a): Compound house design

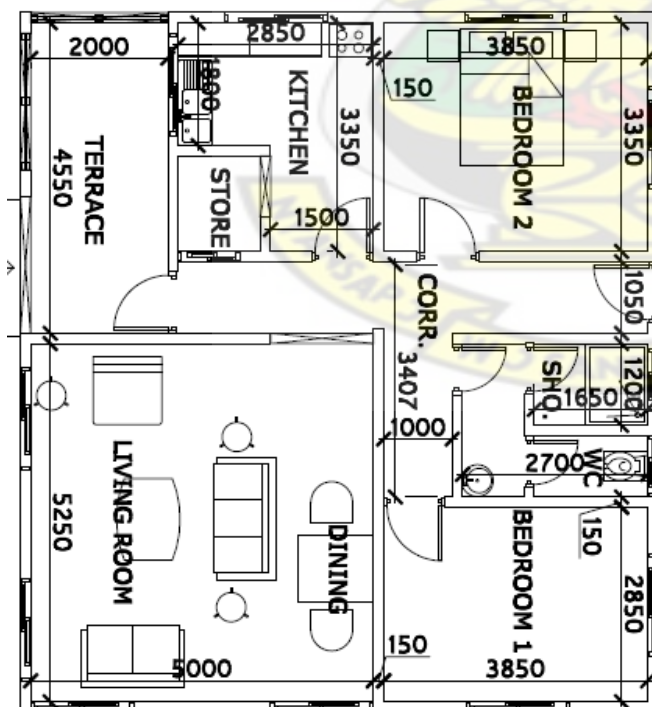


Plate 4.1 (b): Bungalow design

4.4.2.3. Stockpiling of materials and construction of foundation

It was observed that the materials that were commonly stockpiled before the construction of the foundation were sandcrete blocks. Seventy percent of the respondents indicated that they had stockpiled sandcrete blocks. Other materials respondents indicated they had stockpiled before construction were corrugated roofing sheets (55%), window frames (63%), and louver blades (50%) respectively. One interesting phenomenon that came to light during one of the focus group discussions is that, some house owners will normally deposit money with building materials suppliers and allow these suppliers to keep the materials for them or any time they are in need of those materials the suppliers will then supply them. What is done in those cases is that, the prospective builder will agree with the supplier, the market price of the materials at the time the money is deposited with the supplier, so that any time the builder needs the materials it is then supplied to him at no extra cost irrespective whether the price of those materials had change or not. Table 4.6 shows the number of developers who had stockpiled building materials.

Table 4.8: Stockpile of building materials before the construction process

Type of materials	Frequency	Percent
Sandcrete blocks	280	70
Roofing sheets	220	55
Window frames	250	63
Louver blades	200	50
Total		100*

* Responses do not add up to 100% because of multiple responses

Source: Field Survey, (2009)

However, 30% of the sampled respondents did not stockpile sandcrete blocks before actual house construction. It was observed that, those who did not stockpile the sandcrete blocks were those who built their houses using the traditional swish (mud). The average time for stockpiling building materials depends on the nature of the material, the storage space of that

the house owner and the degree how that material easily gets out fashion as construction material. It was observed that sandcrete blocks were stockpiled for an average storage period of 4 years usually on the proposed building site. Stockpiled sandcrete blocks are then used to construct the foundation.

4.4.3. Construction of walls to lintel level

The next stage in the self-help housing development process is the construction of wall to a certain level after the foundation has been laid. Again depending on the financial position of the builder, the next level is the building of the walls to lintel level. The construction of walls to lintel level can also take two phases. In instance where the builder has not mobilised enough savings, walls are built up to some few meters above the foundation. Plate 4.2 shows the construction of walls to lintel level. It was revealed that the period for this phase range between one to two years.



Plate 4.2: Construction of walls to lintel level

4.4.4. Completion of walls (lintel and gable), fixing of frames of doors and windows and roofing

The third stage in the self-help housing development process involves the completion of the walls, fixing of door and window frames and roofing. This also depends on income level of the household. It was observed that, in some cases the walls are completed, and it takes the builder an average of one year to roof the structure. Plate 4.3 shows the completion of walls to gable level. The average period for this stage is one year



Plate 4.3: Completion of walls to gable level

4.4.5. Wiring for electricity, plumbing and connection to water, plastering, flooring and painting,

The four stage of the self-help housing development process as observed in the study communities are wiring for electricity, plumbing works and connection to water, plastering and painting. There can be several stages within this stage depending on the availability of funds. It was observed that, builders usually will start with the ones that are less costly to

install and gradually access the other services. Plate 4.4 shows the plastering stage of the incremental building process.



Plate 4.4: Plastering stage of the self-hep housing process

4.4.6. Improvement and extensions

The next phase in the process entails the extension of the core unit by making additions to the building and adding number of bedrooms or improvements which also entail gradually replacing the less permanent materials of construction to more permanent one. Plate 4.5 shows the extension made to the core unit of a house. The survey also revealed that, for the compound house style of construction, several extensions can be made. The home owner normally would construct the first leg of the compound to enable him/her to move in. The other legs are gradually improved over a period of time – the actual duration depends on the financially status of the developer and sometimes can take between 5 -15 years to complete. Plate 4.6 shows the extension of another leg of the compound house. The part marked with red lines shows the extension.



Plate 4.5: Core unit with indication of future extension

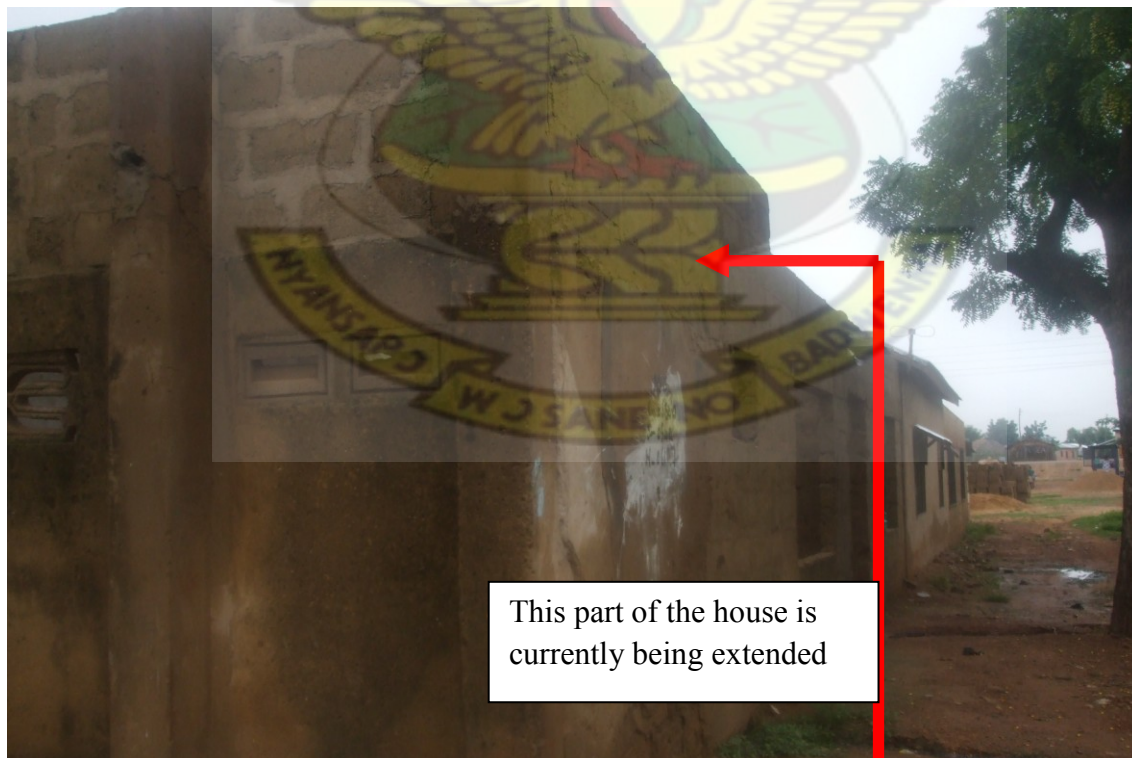


Plate 4.6: Extension made to the core unit



Plate 4.7: Extension made to compound house

The extensions and improvement made to the core unit are meant to provide more accommodation for the household or for rental purposes as well improve on the quality of the building. The survey revealed that of 115 extensions made, 4% provided rental accommodation to other people rather than the household members alone.

Besides, most of the house owners had done some improvement on their properties. These improvements included fixing/repairing of walls, replacing the roof and fixing the floor. Out of the total of 192 improvements made, 60% went into fixing/repairing walls, 35% went to replacing roofs and 5% were for fixing of floors.

4.5. Quality of Self-Help houses

4.5.1. Characteristics of construction labour in incremental building process

The survey also indicates that, 30% of developers used hired artisans for the construction of their houses. This also constitutes monetary inputs to the building process. Furthermore, most of the developers used self-help strategies to build their homes. They contributed in the

construction process by building their homes by themselves – doing the labour aspect that is their sweat equity contribution. This was particularly so in the atakpame type of construction. Others also used self-help strategies together with hired artisan. Table 5.7 shows the non-monetary contribution in the development of progressive housing. Forty-five percent of the developed used self-help (labour) to build, while 25% used both self-help and hired artisans

Table 4.9: Type of labour used

	Frequency	Percent
House owners doing part of the work themselves	180	45
Hired Artisans	120	30
House owners doing part of the work themselves and Hired artisans	100	25
Total	400	100

Source: field survey (2009)

4.5. 1. Physical characteristics of Self-Help housing

The physical characteristics of the developments ranged from sandcrete blocks to swish construction. 70% of the developments were constructed with sandcrete blocks making the superstructure, 87% had cement screed floor finishes and 44% had corrugated iron sheets roofs .The survey revealed that most of the properties were in general good state of repair. However, the quality of materials and construction standard depend on the income levels of house owners. It was found that, those house owners who have regular source of income like salaried workers had houses of much high quality than the peasant farmers. Plate 4.8 and 4.9 shows the quality of houses of two different house owners.



Plate 4.8: High quality house of a civil servant



Plate 4.9: Low quality house of a peasant farmer

The charts below show the physical characteristics of the development while the plates show the visual representation of these characteristics.

Chart 4.2: Composition of wall materials

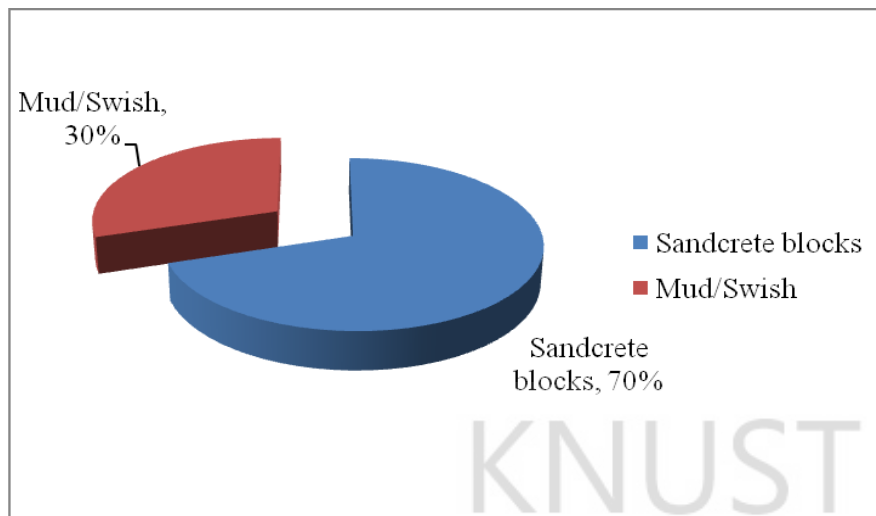


Chart 4.3: Composition of roofing materials

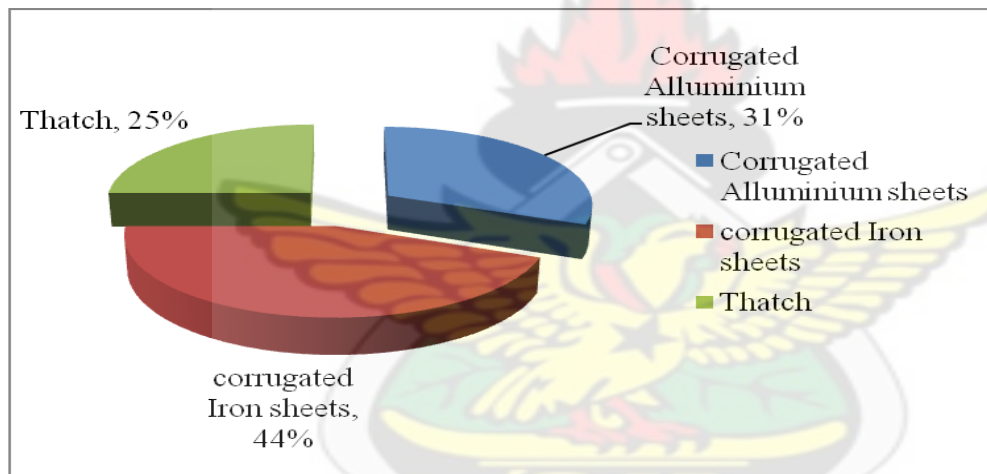
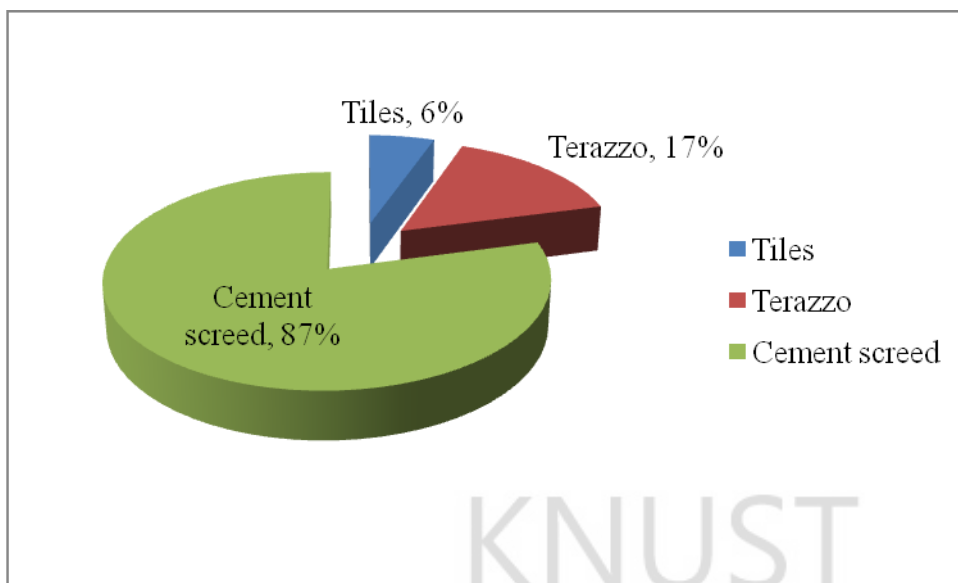


Chart4.4: Composition of flooring materials



4.7. Infrastructure

4.7.1. Water and sanitation

In terms of water and sanitation, 31%, 23% and 20% of the developments had water closet and private septic tanks for effluent discharge in Jisonayile, Shishegu and Kakpayile respectively while 12%, 18% and 32% had KVIP respectively. Forty-four percent in Jisonayile, 48% in Shishegu, and 35% in Kakpayile depended on public toilets while a total of 35% did not have access to toilet facilities and therefore used 'free range' for effluent discharge (see appendix E for table). Again, 80% of respondents in all the three suburbs had access to pipe borne water from the public mains.

4.7.2. Access roads

All the three suburbs in the study area had access roads most of which were untarred. Jisonayile had only one principal street tarred while the rest had access through well recognized untarred streets. However, it was observed that, those properties farther away from the main streets did not have well-defined streets.

4.7.3. Electricity

Eighty percent of the properties surveyed had electricity connected from the public mains and the entire three neighbourhoods were served with electricity. The remaining 20% did not connect to electricity even though there was electricity connection within the neighbourhood.

4.7. Affordability of the self-help housing approach

The ability to save for both the purchase of land and the construction of the house determines the ability of the self-builder to buy land and construct the house. Savings by individuals also determine when a self-help house is completed or built to a state of habitation. It is revealed that on the average 95% of house owners across the study areas utilized personal savings as their main source of finance to construct their houses. Majority of the house owners are able to save GH¢50 as shown in section 4.4.2.1. Comparing this to the current price of peri-urban land of GH¢700 on the average, house owners are able to save for at least fourteen months to be able purchase a building plot. When respondents were asked how long it took from the land purchase to the construction of the core house, they indicated that it ranged between 5 to 8 years. What this means is that, house owners that are able to save the GH¢50 are able to build houses that cost GH¢4,800 over the eight years period. If household savings is GH¢150, then house owners are able to build houses that cost GH¢14,400. That is, if assume that the total monthly savings is used for house construction. The construction cost is spread over an average period of eight years.

Besides, the study also revealed that, the house owners is directly involved in the supervision as well as contributing labour during the construction of the house. This was noted Hokans (2009) when he described the monetary and non-monetary inputs of the self-help housing process. The non-monetary input is seen as a cost cutting strategy in order to improve the affordability of the self-help housing process. These strategies include the supervision of construction work, doing part of the work, getting relatives involved, seeking

cheaper building materials by buying them ahead of time of need and hedging against inflation, utilising cheaper transportation methods by storing some of these materials especially sandcrete blocks on site. It is apparent that, these strategies have the capacity to reduce the cost of self-help housing development due to the type of labour, finance and managerial style being used. Therefore, the self-help housing building process has the advantage over ready built housing because of the ability of the owner to buy land and construct a house in a financially manageable way which reduces cost in the long run due to the *spreading-out* effect. Hence housing is made affordable to people who would otherwise be ineligible to own their houses left to the open market mechanisms.



CHAPTER FIVE

SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

5.1. Summary of findings

5.1.1. Household characteristics

The socio-economic characteristics of the respondents with regards to age structure and gender, indicate that, self-help housing development process are undertaken at the later stages of respondents' active productive years. House owners are middle aged head of household in their mid-40s. Most of the house owners work in the informal sector with little or no formal education. The few that depend on the formal sector for their livelihoods are mainly civil and public servants. Majority of house owners employed in the informal sector are peasant farmers whose incomes are dependent on the seasonality of their farmer produce. Most of them start the self-help housing process with the traditional swish/mud and gradually replaced the mud hats with rectangle compound style houses. Most of the home owners who fall within these categories were farmers, traders, civil and public servants. Most respondents fall within the income categories of GH¢101-150 and GH¢50-100. However, Jisonaayili showed different income levels with more (52%) respondents earning between GH¢151-250 and over per month. Also home ownership through this process is skewed towards men with very few women participants.

5.1.2. Access to land

Access to land for self-help housing development is mainly by purchase from traditional land owners with very few home owners having lease documents covering their properties. The land acquisition process follows legal customary rules and procedure. Majority of house owners do not have lease document covering their plots. Ignorance and lack of education of the procedures of land documentation is a major factor that explains why most house owners have not registered their lands. Cumbersome land documentation and the cost of lease

preparation other reasons why high percentage of respondents have not registered their lands. House owners perceived that the allocation letters that have been issued with by the traditional land owners are sufficient prove of their interest in their land and hence do not see the need to go through the lengthy and cost land registration process.

5.1.3. The self-help house building process

Furthermore, the self-help housing development process is carried out in seven principal phases. The first phase involves purchase of land far in advance of the decision to develop. The second phase involves mobilisation of funds, design of house, stockpiling of materials and construction of foundation. The third phase involves the construction of walls to lintel level. The next phase involves completion of walls and roofing. The fifth phase is wiring for electricity, plumbing and water connection. The sixth phase is plastering, flooring and painting and finally improvements and extension of the core units. This phase is actually an age long one which can go on for generations, sometimes never completed by the original owner.

5.1.4. Quality of self-help houses

The physical characteristics and conditions of the houses depend on the income levels of the developers/home owners. The very poor low income families whose incomes are irregular start the process of home acquisition with less permanent materials of constructions – mud and swish constructions with thatch roofs. This gradually gives way for more permanent building materials as the income levels rises. Those with more permanent employment and regular sources of income use more permanent construction buildings materials – sandcrete blocks and corrugated aluminium roofing sheets. Those who use more permanent building materials use an average of eight (8) years to complete the core housing unit while those use less permanent building materials used an average of one year to complete the core unit. Again, those who use quality materials use hired artisans for the construction process while

those who use the traditional swish/mud building materials engage household labour to build. Besides, those developers/home owners who build with permanent materials stockpile these materials for some time before they actually construction and improvement of the house. The length of time for stockpiling building materials depends on the type of materials but generally sandcrete blocks are the most widely stockpiled materials with an average duration of four years.

5.1.5. Financing of self-help housing development

The principal source of funds for both the construction of core units and extensions and improvements is individual and households savings. Home owners save for long period of time before commencing the construction process. The period of savings also depend on the income levels of the developers. Monetary savings are usually converted into materials in the form of stockpiling of building materials either on the site of the proposed building or instances with the building materials suppliers. Very few home owners have taken personal bank loans in addition to their savings to build. This group of developers/home owners are those employed in the formal sector. In addition, the main reason why people engage in self-help housing development is lack of adequate funds.

5.1.6. Affordability of self-help housing

The cost of construction a core unit of at least two bedroom detached unit ranged from GH¢4,800 for traditional swish building to GH¢14,400 for sandcrete block building. Construction costs are spread over the average period of the self-help housing process, that is, between five to eight years. Compared this to the levels of income (GH¢100 to 300) of house owners are able to expend the monthly savings on house construction. What makes this affordable is that house owners under take the supervision of construction work, doing part of the work, getting relatives involved, seeking cheaper building materials by buying them

ahead of time of need and hedging against inflation, utilising cheaper transportation methods by storing some of these materials especially sandcrete blocks on site

5.1.7. Government's role in supporting the incremental housing process

Lessons from the case study indicated that financing low income housing programmes can be done by blending market-base finance and capital subsidy. Therefore in addition to this market-based housing finance strategy, capital subsidies could be introduced to support individuals who might not be able to meet the terms of the market-based financing strategy. Again providing credit guarantees to market-based financial institutions to lend to the low income groups has been proven by the case study to be another effective tool of providing affordable housing finance to these income groups.

5.2. Recommendations

5.2.1. Housing microfinance

Finance has been identified one of the critical factors that affects the self-help housing development process. Financing the self-build housing process and later developing the necessary infrastructure with limited finances is a key determinant to the type of neighbourhoods the self-build area will transform into the future. Most self-builders struggle to buy land and construct their houses. Most have limited capital and as shown are not creditworthy enough to access loans from local banks. Whereas banking regulations and conditions have always been pointed out as requiring revision, it has also been found that the way in which to access credit matters especially in the development of housing. Since the Tamale Metropolitan Assembly is in charge of orderly development of physical development in the Metropolis, it should facilitate and initial innovative housing finance mechanism. One of the innovative financing models that fit in the self-house building process is housing microfinance. Housing microfinance has been implemented by recognised microfinance institutions like, the Grameen bank, Bofo Microfinance in Ghana. These micro-financing

institutions distinguish the different phases of the house development process by the medium and low income urban residents. They have developed flexible lending methods; for example, lending for land purchase, house construction and even infrastructure development. Lending at every stage is governed by specific conditions and requirements. By giving phased, small and affordable loans they have been able to help self-builders acquire land and construct houses, positively contributing to overall home ownership. The Assembly through MASLOC could under study these institutions and develop a vibrant housing microfinance product. Fortunately, the Assembly houses the office of the Microfinance and Small Loans Centre (MASLOC) which the Assembly is directly in charge.

5.2.2. Revolving Loan Funds (RLF)

The Assembly in conjunction with its development partners could set a revolving loan fund that with the object of providing affordable housing finance to the low income groups. Though the market base housing microfinance has been proven to successful, it has also been criticized of charging high interest rates. Therefore, a revolving loan fund could aim at addressing this for the very low income groups. RLF is a pool of public- and private-sector funds that recycles money as loans are repaid. It receives public money and gives loans for housing and small business needs. It operates in principle by issuing new loans as old loans are repaid. This principle also emphasises that the recovered loans should maintain their real value and should generate a small nominal capitalization of the fund in the medium to long term. Above all, the fund should aim to serve the target population (Stein and Castillo, 2005). The proposed RLF would imbue these guiding principles.

5.2.2.1. Seed capital for RLF

The source of funds for the seed capital could come from the Heritage Fund of the Petroleum Revenue Management Act 2011, Act 815. Section 10 of the Act provides for the setting of the Heritage Fund to provide an endowment to support future generations when the

petroleum revenue would have been depleted and to receive excess petroleum revenue. One percent of the excess revenue could be put into the revolving loan fund.

5.2.2.2. Management of the RLF

A Select Committee of the Metropolitan Assembly comprising some selected Assembly Men, Public Works Department and chaired by the Metropolitan Chief Executive could be put in place so as to be responsible for vetting and assessment of loan application. It could work in conjunction with identified community based organisation to establish the eligibility criteria for accessing the loans.

5.2.2.3. Loan terms and conditions

The socio-economic characteristics of house owners indicated that majority of them are unable to purchase complete housing unit. Therefore, the loan size of the loan should correspond with the cost of each phase of the building process. Loans should not be disbursed directly to the house owner. It should be converted into materials and paid directly to suppliers of these materials for them to deliver it to the prospective house owner. This will help check misapplication of loan funds. The interest rate on the loan should not be too exorbitant since it is meant to help the low income groups to access housing. The suggest interest rate could be 5% -8% p.a. It should be such that it is able to cover operational cost of the loan administration so as to ensure the sustainability of the fund. The repayment period should depend on the size of the loan amount but generally should not excess five years per each phase of the building process.

5.3. Educate house owners on the need to register their lands

The study revealed that majority of progressive housing developers/home owners did not have adequate land titles. They depended on land security which is granted by the customary land allocation process. House owners should be educated on the land registration process and the importance of registering one's land. The Regional Lands Commission in conjunction

with the Assembly Men could embark of educational campaigns on the land registration procedures.

5.4. Local building materials technology

The study revealed that, quite a number of home owners used local building materials like swish/mud for the core housing units and these materials. The Public Works Department (PWD) of the Metropolitan Assembly should educate prospective house owners on local building technologies that have been developed in the country. For instance the use stabilized adobe and laterite blocks, pozzolana cement and rammed earth technology. This will improve the quality of the materials used.

5.5. Technical assistance

It was observed that most house owner build with little technical assistance in terms of the design, choice of materials and standards of material. The PWD should take active role in the RLF management and intervene in the process by organizing technical assistance packages like training and capacity building for artisans in the building industry so as to improve the quality of construction works and enhance the value of self-help housing. Besides, it could further support house owners with building technologies that utilized locally manufactured building materials. Furthermore, the PWD could also advice low income self-builders on land acquisition and documentation process, planning and building permit acquisition and as well provide education on the building regulations in the country. These services should be paid by the borrower and should be subsidized by the trust. A service charge of about one percent could be factored into the interest component of the revolving loan to defray the cost of providing this service

5.2. Conclusions

Access to finance is the most critical factor that affects the self-help housing development process. Finance determines the quality of the houses produced through this process and the

duration of the process with regards to how many years one can actually complete the process. Low-income groups in the study area depended on personal savings and those who could save about GH¢150 and above were found to have better quality houses than those could save less. Therefore, the self-help housing process and the various stages in the process are largely determined by the income levels of the builders.

Access to land is not complex and therefore respondents did not encounter difficulties in purchasing land. The study revealed that majority of progressive home owners did not have adequate land titles. They depended on land security which is granted by the customary land allocation process. Self-help builders depend on allocation letters as evidence of transaction between them and the tradition land owners. Most self-help builders have not registered the land. The reasons that could be deduced from this are that, many of them especially those without formal education are ignorant of the need and the process involved in the land documentation process. House owners especially indigenes from the area perceive the customary land tenure system to have a certain degree of security and hence there no need to go through the formal land registration process.

Self-help housing is affordable to the low-income groups because of the flexibility in the choice of design, and ability to make modification even during the building process. House owners that are able to save the GH¢50 are able to build houses that cost GH¢4,800 over the eight years period. If household savings is GH¢150, then house owners are able to build houses that cost GH¢14,400. The construction cost is spread over an average period of eight years and the builders do not have to accumulate huge sum of money before they can build. Construction labour is directly supervised by the builder and the also reduces the cost and improves on affordable. Stockpiling of building materials is a strategy that is used to hedge inflation because, the builders normally deposit money with suppliers before they actual need of these materials.

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APPENDICES

APPENDIX A: COMPUTATION OF SAMPLE SIZE

Sample Size Formula

$$n = \frac{N}{1+(N)(x)^2}$$

Using confidence interval of 5%

n = sample size

N = Total number of houses

X = margin of error

Total number of houses in the Tamale Metropolitan Area = 26,792

$$\begin{aligned} N &= \frac{26,792}{1+26,792(5\%)^2} \\ &= \frac{26,792}{1+26,792(0.0025)} \\ &= \frac{26,792}{1+66.98} \\ &= \frac{26,792}{67.98} \\ &= 394.12 \end{aligned}$$

Say 400

APPENDIX B

QUESTIONNAIRE FOR PROPERTY DEVELOPERS/OWNERS

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI

FACULTY OF PLANNING AND LAND ECONOMY

DEPARTMENT OF LAND ECONOMY

MPhil IN LAND MANAGEMENT

HOUSE OWNERS SURVEY

Support for self-help housing especially progressive/incremental housing in Ghana has received little attention by government. Financing and development of progressive housing is largely driven by individual households through their sweat equity though it has been recognised that this type of housing cater for the housing needs of many Ghanaians. This survey seek to gather basic data about the current state of progressive housing so as to develop an integrated housing programme and policy framework that will facilitate access to affordable housing by the lower to moderate income households. It is an instrument for my master thesis on *“Provision of affordable housing for the low-income groups in the Tamale Metropolitan Area through self-help housing approach”*.

The results of this survey and the discussions at any subsequent meeting will be kept confidential. The details requested are important for the researcher to understand and analyzed the opportunities that exist for an integrated programme and policy framework for low-income housing in Ghana. Your contribution is of high relevance for us and all people accessing shelter through progressive housing in Ghana.

A. General information

Age	Sex	Marital status	Education level	Current employment	Nature of employment

B. Socio-economic data and family structure

1. How many households live in this house?.....
2. How long have you lived in this neighbourhood?.....
3. Where were you living before?.....

4. What is the blood relationship between the landlord and the tenants?.....

5. How many people are employed in your household?.....

6. How much do you earn in a month?

1=GH¢50 - GH¢150 4= GH¢350 - GH¢450
2= GH¢150 - GH¢250 5= >GH¢450
3= GH¢250 - GH¢350

7. Specify the amount you spend in a month on the items listed in the table below

Sources of Expenses	Amount spend in a month						
Expenditure range (GH¢)	0-5	5-10	10-15	15-20	20-25	25-30	>30
Rent							
Electricity							
Water							
Telephone							
Transportation							
Food							
Medical							
Clothing							
School fees							
Loan repayment (if any)							
Others (specify)							

8. In respect of the expenses in 8, do you receive any contributions from family members?
Yes/No

9. If yes, how much contribution do you receive in a month?

10. Do you have additional sources of income? Yes/NO

11. If yes, how much do you receive from this additional source of income in a month?.....

12. How much are able to save in amount?.....

C. Data on house

13. The house you live is a) built by owner b) rented c) family house d) inherited

14. If owner occupier, you bought: a) only the plot b) plot and house

15. If you bought only plot, how much did it cost you?.....

16. If you bought plot and house, how much did it cost you?.....
17. When did this transaction take place?.....
18. Which kind of property document do you have?
19. Who sold the plot to you?
20. Who are the owners of the land according to the document you have?.....
21. When did you get this document?.....
22. Do you have building permit on your house? Yes/No
23. If no, why?.....

24. Physical description of the house (describe type of materials and condition)

Walls

.....

.....

Floors

.....

.....

Roof

.....

.....

Toilet facilities

.....

.....

Kitchen

.....

.....

Number of rooms.....

Number of persons per room.....

D. Source of finance for building

25. How did you finance the construction of your house? (Multiple response possible)

- a) own savings b) advance from tenants c) assistance from family members d) loans from financial institutions e) other (Specify).....

26. (If answer to **25** is **d**), which financial institution gave you the loan?
(Give the name of the institution)

27. How much loan did you take from this institution?.....

28. What were the terms and conditions for the loan?
.....
.....
.....

29. What were the difficulties (if any) encountered in the loan application process?
.....
.....
.....

30. How did you about it?.....
.....

31. Is the institution (the institution that gave you the loan) specialised in providing financial assistance to people to build their own houses? Yes/No

32. If no, how did you secure the loan from them?.....
.....
.....

E. Building process

33. If you bought only plot in (17), when did you begin construction work on it?.....

34. How long did it take you to complete the house?.....

35. How did you build the house? a) Self-help b) help from household members and friends
c) Hired artisans d) building contractor

36. Did you construct the whole house before moving in? a) Yes b) No

37. Did you stockpile building materials before starting the construction process? a) Yes b) No

38. How long did take you to move in from the start of construction?.....

39. What difficulties did you encounter?.....

F. Home improvement/extension

40. Have you constructed any additional rooms after you started living in your house?
Yes/No

41. If yes, how many rooms?.....

42. Why did you build these additional rooms? a) provide accommodation for family members b) rent

43. What type of improvements have you done on your house since you started living there?
a) repaired roof b) repaired/fixed floor c) repaired/fixed walls d) other (specify)

44. How did you finance the improvements made to your house? a) rent advance b) remittance from relatives c) own savings d) loan from bank e) other (specify)

45. Have you rented part of your house to tenants? Yes/No

46. How long have you been renting part of your house to tenants?.....

47. Is your house connected to electricity and water? Yes/No

48. If yes, did you connect electricity and water before moving in the house? Yes/No

49. Does the Tamale Metropolitan Assembly tax you for this property? Yes/No

Expectations of home owners of government in terms of assistance

50. What type of assistance do you expect from government?.....
.....

51. In what form should the assistance be given to you?.....

52. How would you want this type of assistance to be implemented?.....
.....
.....

53. What aspect of your house would you want to improve?.....

54. Which aspect of your neighbourhood do you like most?
.....

55. Which aspect of your neighbourhood would like improve?

.....

.....

KNUST

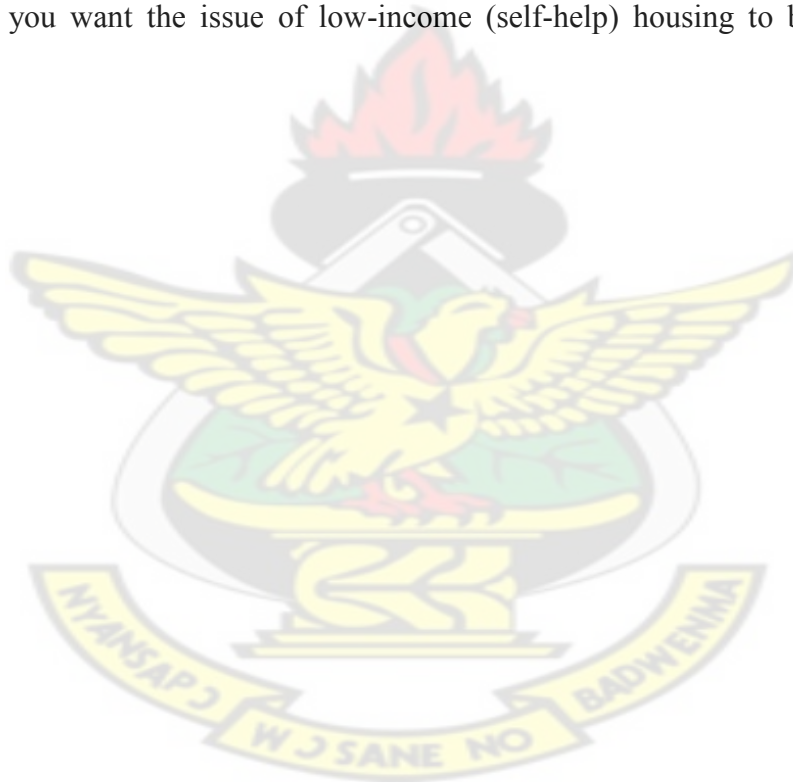


APPENDIX C

FOCUS GROUP DISCUSSION

Guide for Focus group discussions

1. Why do people engage in incremental building practices?
2. How did you acquire the land for building your house?
3. What processes did you go through to get building permit?
4. How did you finance the constructing of your houses?
5. Do you know of any policy issue on low-income housing in Ghana?
6. How would you want the issue of low-income (self-help) housing to be addressed by government?



APPEDIX D

QUESTIONNAIRE FOR THE MINISTRY OF WORKS AND HOUSING

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI

FACULTY OF PLANNING AND LAND ECONOMY

DEPARTMENT OF LAND ECONOMY

MPhil IN LAND MANAGEMENT

Introduction: Support for self-help housing especially progressive/incremental housing in Ghana has received little attention by government. Financing and development of progressive housing is largely driven by individual households through their sweat equity though it has been recognized that this type of housing cater for the housing needs of many Ghanaians. This survey seek to gather basic data about the current state of progressive housing so as to develop an integrated housing programme and policy framework that will facilitate access to affordable housing by the lower to moderate income households. It is an instrument for my master of philosophy thesis on *“Provision of affordable housing for the low-income groups in the Tamale Metropolitan Area through self-help housing approach,*

The results of this interview and the discussions at any subsequent meeting will be kept confidential. The details requested are important for the researcher to understand and analyzed the opportunities that exist for an integrated programme and policy framework for low-income housing in Ghana. Your contribution is of high relevance for us and all people accessing shelter through progressive housing in Ghana.

Name of interviewee :

Position in the Ministry :

Date and time of interview :

1. What type of housing programmes is your ministry currently implementing?

.....
.....
.....

2. What policy and regulatory framework exist in relation to self-help/incremental housing in Ghana?

.....
.....

.....
.....
3. Are there any special programmes for supporting people who build their houses incrementally?
.....
.....
.....

4. What is the extent of incrementally housing in Ghana?
.....
.....
.....

5. Are there any housing programmes targeted at the low/moderate income households living in urban areas?
.....
.....
.....

6. What housing finance mechanisms exist in support for household-driven housing process?
.....
.....
.....

7. What opportunities exist for the introduction of non-conventional housing finance schemes?
.....
.....
.....
.....

8. What is the contribution incremental housing to the total housing stock in the country?
.....
.....
.....

9. Is incremental housing legally recognized by your ministry?
.....
.....
.....

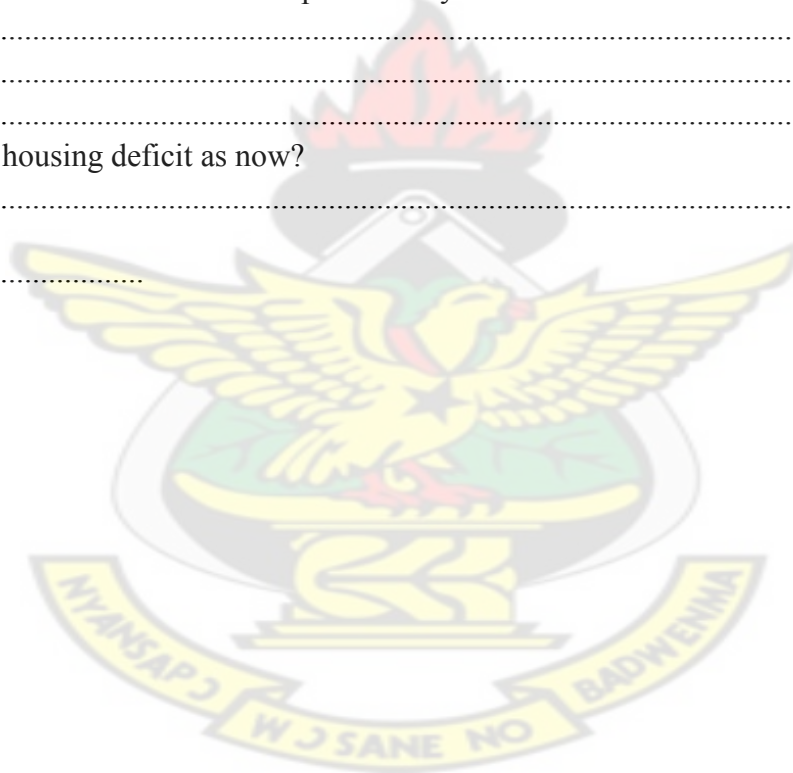
10. What are the effects of incremental housing on urban growth?
.....
.....
.....

.....
.....
11. What policies are in place to ensure that, there is access to land for housing for all income groups in the country?
.....
.....
.....

12. What is the role of your ministry to ensure that there is access to housing for the urban poor?
.....
.....
.....

13. What is the total number of houses provided by individual households in the country?
.....
.....
.....

14. What is the housing deficit as now?
.....
.....
.....



APPENDIX E

TABLES

Educational Status

Level	No	%
Secondary/Technical	30	8
Tertiary	101	25
No basic education	269	67
Total	400	100

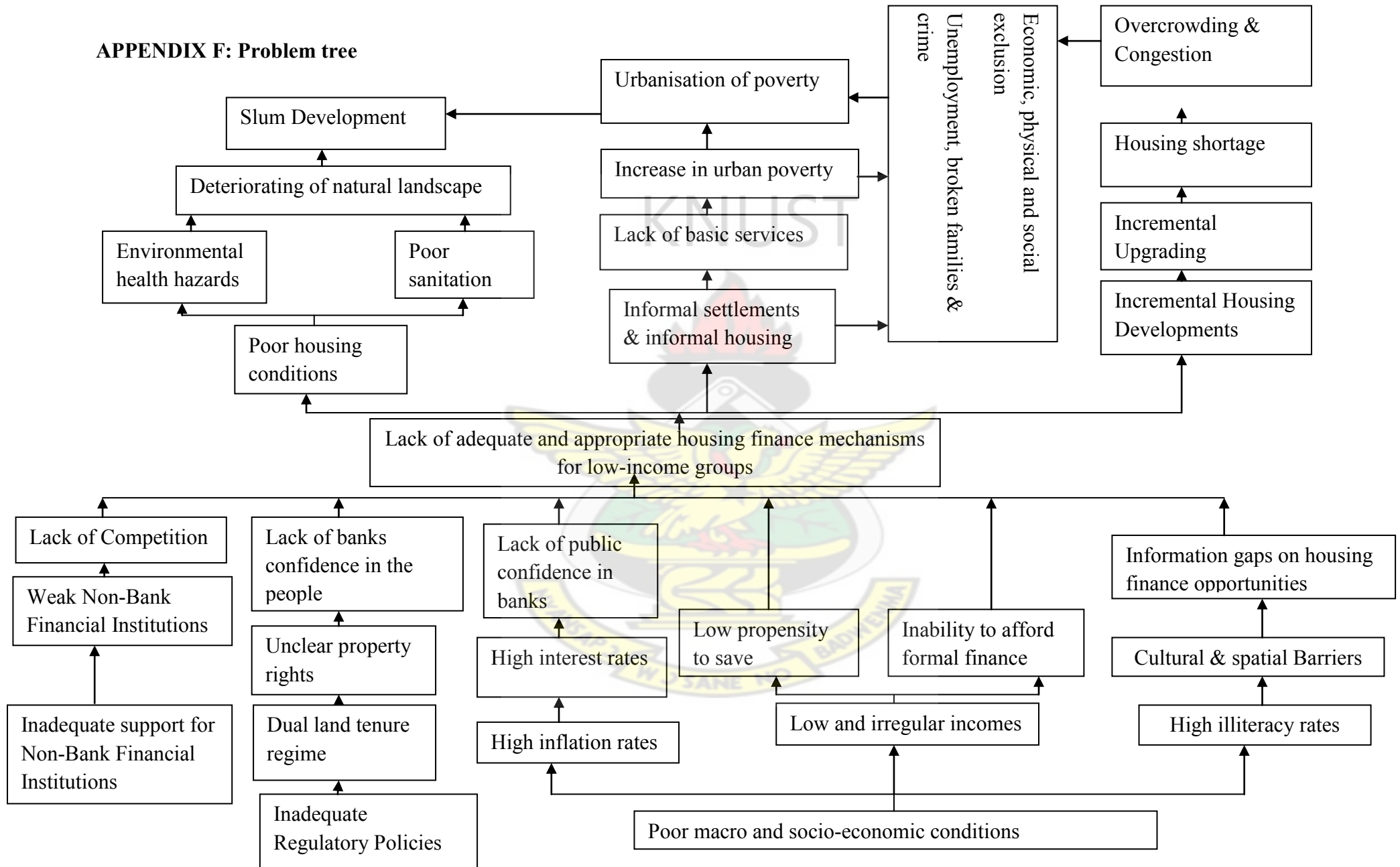
Sanitation facilities

	Jisonayile		Shishegu		Kakpayile	
Toilet types	No.	%	No	%	No	%
Water Closet	25	31	27	23	40	20
KVIP	10	12	21	18	64	32
Public	36	44	57	48	70	35
Free range	10	12	14	12	26	13
Total	81	100	119	100	200	100

Home owners' expectation from Government

Type of support	No	%
Subsidies	260	65
Provide affordable housing	120	30
Provide infrastructure	20	5
Total	400	100

APPENDIX F: Problem tree



APPENDIX H

PICTURES



Plate 1 (a)



Plate 1 (b)

Both plate show the nature of progressive housing development of much poor urban households in Shishegu and Jisonayili, Tamale



Plate 2 (a)



Plate 2 (b)

Both plates show the nature and quality of progressive housing development of moderate income household in Jisonayili and Kakpayili respectively.