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Concepts and Debates Relating to Affordability and Affordable Housing

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Abstract
The paper introduces the theoretical framework of the study and this chapter presents some of the contemporary debates in conceptualising the relationship between affordability and affordable housing. The aim of this chapter is to provide a platform for assessing Ghana's housing affordability problem. The chapter is structured as follows. The first part reviews the concepts of affordability, discusses and defines affordability based primarily on literature for developed economies. Housing affordability is of great concern for policy makers. Access to adequate, secure and affordable housing is fundamental to the achievement of a socially cohesive and inclusive society. There is substantial evidence of a growing housing affordability problem in SSA and numerous interrelated factors have contributed to the loss of affordability. The second part concentrates on explaining the housing problems in SSA in which affordable housing is rethought in the context of developing countries.

Keywords: *Concepts and Debates, Affordability and Affordable Housing*

1.0 INTRODUCTION

Housing affordability has become a popular term among policy makers and housing researchers (Lux, 2005; Chen et al, 2010). As housing affordability is linked with many complex and interacting variables a number of issues arise when considering a definition of affordability, including limited information. There is no single agreed, complete and all-encompassing definition of housing affordability (O'Flynn, 2011; Jewkes, 2008), and "at best it is ambiguous" (Linnerman and Megbolugbe, 1992). As argued by Bramley (1994) there is a lack of clarity on definitions due to inherent ambiguities in housing affordability concepts and political caution or expediency. Bieri (2012) argues that housing affordability is the result of the interaction of both demand and supply factors. There has been considerable discussion, debates and multiple definitions or vague explanations by scholars, researchers and housing policy advocates (Stone, 2006a). There is no universal definition for housing affordability and it is a contested concept (Chen et al, 2010).

Housing affordability involves more than the often used simplified measure of housing price/cost to household income (UN-Habitat, 2011a). Different definitions have been cited by housing researchers and other housing stakeholders (see MacLennan and Williams, 1990a; Hancock, 1993; Hulchanski, 1995; Freeman et al, 1997).

It is clear that there are differing opinions on what housing affordability means (Mulliner and Maliene, 2011). Housing affordability is likely to vary for different tenures and different groups of people. As a result, Chen et al (2010) suggest that the housing problem is unclear. Many factors contribute to housing problems (Yates et al, 2007) and affordability is 'multi-dimensional' (UN-Habitat, 2011a). As a result, Yates et al (2007) argue that driving factors can be found both within the housing system and beyond it. Housing affordability both affects and is affected by a broad range of attributes (Mulliner and Maliene, 2011). Many studies on housing affordability seek to extend beyond this notion of financial impacts on households and wider ranges of factors that influence households (Mulliner and Maliene, 2011). This invokes the need for a broad and wide set of criteria by which housing affordability can be measured and assessed.

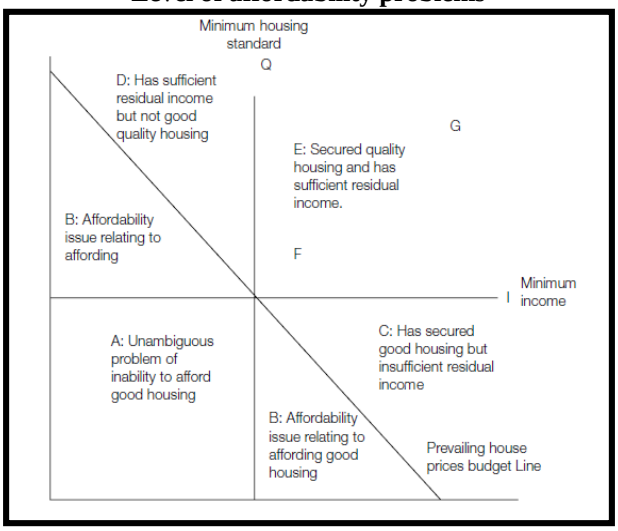
2.0 MEASURES OF HOUSING AFFORDABILITY

There are many ways to measure affordability and which approach is used depends on the purpose. Different measures linked to different elements of the concept have been developed over the years (O'Dell et al, 2004). There is still debate over the benchmark beyond which housing is considered unaffordable or affordable. This is due to the fact that several interrelated factors contribute to the affordability of housing (Robinson et al, 2006). As a result, there is no common generally accepted method to measure housing affordability and housing affordability is measured in terms of the share of income that a household spends on its housing (Belsky et al, 2005). Whitehead et al (2009, p.5) suggest that "it is usual to look at the annual income necessary to purchase or own a home or to rent privately on the open market". In this case housing affordability has three key dimensions - for renters, would-be-homeowners and existing homeowners (Centre for Housing Policy, 2006). Alternatively, Burke (2004) identifies two broad groups of affordability measures 'shelter first' and 'non-shelter first'. Belsky et al (2005) on the other hand, suggest three approaches to measuring housing affordability namely: the housing cost approach, the non-housing cost approach, and the quality-adjusted approach.[1]

Chapman (2006) suggests that housing affordability measures the financial outcome for a household of renting or purchasing the dwelling they aspire to occupy. This means that affordability measures depend on both housing costs and incomes, but trends in the distribution of incomes are important in explaining in housing costs experienced by the poor (Quigley and Raphael, 2004). Different measures can reveal a very different picture of developments in affordability and not all these measures can be used to refer to home ownership. This study draws on the mostly widely used measures that focus on access to home ownership, shelter first and the housing cost approach (Belsky et al, 2005); or ratio of housing costs to income and residual income (Whitehead et al, 2009; Robinson et al, 2006; Jones et al, 2010); or 'a proportional measure' and a 'residual measure' (Tang, 2009). These measures provide very important contributions to housing affordability assessment. However, there are several technical methodological issues associated with the use of both the ratio and residual approaches (Henman and Jones, 2012). In particular Henman and Jones (2012) note that there are questions relating to what makes up housing costs and the measurement of household's income.

Smith (2009) also argues that their associated limitations do not permit them to be used to cover the ongoing operational costs of home ownership. As a result, Robinson et al (2006) suggest that no single measure produces a complete picture of a housing situation and considers a number of measures give a reasonable overall picture of affordability. As shown in Figure 3.1, Bramley and Karley (2007) suggest that there are different levels of affordability problems that are defined in various dimensions. As suggested by Wallace et al (2009, p.8) "there is no absolute measure of housing affordability because the extent of it is influenced by the approaches taken to its measurement". The next sub section will focus on two basic affordability measurement approaches and their relative strengths and weaknesses.

Level of affordability problems



Source: Bramley and Karley (2007)

2.1 House price/cost to income ratio: Ratio indicators

[1]For further explanation of these methods see Jewkes and Delgadillo,2010; Ndubueze ;2009

The approach has been the most common method of measuring housing affordability (Freeman et al, 1997; Chaplin and Freeman, 1999; Hulchanski, 1995; Chen et al, 2010). As a shelter-first method, it gives a general indication of whether house prices or costs are affordable in relation to incomes (Whitehead et al, 2009). It gives some indication of difficulty in accessing the housing market. Gabriel et al (2005, p.22) stress that ratio measures attempt to "address the question of whether or not households are spending an unacceptably large proportion of their income on housing costs". This means that a ratio measure specifies the acceptable proportion of income to be spent on housing (Yates et al, 2007). While Bourassa (1996) claims that, "the costs of home ownership are endogenous to household tenure–choice decisions", the costs incurred will have a significant impact on whether or not housing is affordable. The ratio measure of housing affordability indicates if households consume more than a specified percentage of their income on housing costs. Like all research methodologies, the ratio approach is not without advantages and drawbacks (Belsky et al, 2005) (See Table 3.1).

Ratio measures can be broadly divided into those that consider access to housing and those that measure the affordability of repaying the mortgage debts. The different measures can reveal a very different picture of developments in affordability and much of the difference happens depending on whether households are considering access to the housing market or the cost of servicing the cost of a mortgage once a household becomes a homeowner. For the purpose of this study, house price to earnings ratio; loan to income ratio; deposit to income ratio are used as building blocks to assess the housing affordability problems in the case study area (see Chapter 7). In this way we use alternative methods for enriching understanding around a range of affordability and housing market issues. These measures are credited as a proxy for the level of dysfunction in the housing market: "a high ratio indicates restrictions to supply and a low ratio indicates poor-quality accommodation" (Datta and Jones, 1999, p.7). These serve as reminders of the differences between regions, countries and cities and do not always reflect the variability in quality of the local housing stock or of local income inequalities. They have been used widely to compare geographically different housing markets (Bogdon and Can, 1997) and in international comparison (Thalmann, 1999).

2.2 Residual income

The residual income approach looks at the affordability capacity of different households on housing after taking into account the other necessary expenditures of living (Stone et al, 2011). Residual affordability measurement techniques identify the after-housing income of a purchaser. This means that residual measures of housing affordability operate by assessing against a benchmark of the amount of income a household has left after housing cost payments have being made. In this case to measure affordability the correct residual income is only used and can be assessed after the actual cost of housing has been found out. Housing affordability is then defined, "in terms of the adequacy for other household needs of income remaining after deducting housing costs" (Henman and Jones, 2012, p.8). This approach is embedded in normative standards for housing and non-housing expenditure (Bramley, et al, 2006). As a result, Henman and Jones (2012) suggest that if household can both pay for adequate housing and at the same afford the other necessities of life, and then housing is affordable. They further argue that housing is unaffordable if the remainder of the household income is below a standard benchmark or cannot meet its non-housing expenses after deducting housing costs (Burke et al, 2010). This implies that this measure is subject to the effect of housing costs on the ability of households to meet essential non housing costs. As a result, the application of this approach to measurement of housing affordability depends on the availability of benchmarks for assessing income adequacy.

Strengths and weaknesses of ratio and residual housing affordability measures

Ratio measure	**Residual measure**
Strengths	Strengths
• relatively easy to apply • easy comparisons • reflects market realities in housing and income	• assesses household living standards • sensitive to household structure • sensitive to diverse income levels • reflects market realities in housing and income
Weaknesses	Weaknesses

• arbitrary benchmark • needs modification to address household structure • needs modification to address issue of households with different income levels • does not address housing quality and adequacy	• more complex to apply • not sensitive to geographic variations in cost of living • does not address housing quality and adequacy

Source: Henman and Jones (2012)

2.2 Affordability threshold or standard benchmark

Affordability problems are considered as operating at different levels. An overview of the different levels that lead to affordability concerns is reviewed by many writers (see Bramley and Karley, 2005). Yet it is difficult to arrive at a universally accepted definition of a threshold beyond which housing is not affordable. In general, differences in the way the problem have been operationalised are linked to the nature of the housing system within countries, inherited policy settings and the orientation of policy reforms (Gabriel et al, 2005). Local circumstances could justify using different figures and the measurement framework used will be based on normative judgement (Bramley and Karley, 2005).

In the US Linneman and Megbolugbe (1992) and Bogdon and Can (1997) note that from the 1970s the conventional public policy indicator of affordability is actually the percentage of income spent on housing cost. Households that spend 30 per cent of their income on housing are classified as having an affordability problem. In the UK households can be considered able to afford to buy a home if it costs 3.5 times the annual gross household income for a single earner household, or 2.9 times the gross household income for dual-income households, or able to afford market renting where the rent payable is up to 25 percent of their gross household income (Whitehead et al, 2009).

Different benchmark measures apply within different countries. Stone et al (2011) acknowledge that most English-speaking countries accepted a range of between 25 to 30 per cent in the 1980s. Until recently many researchers extended the rule of thumb ratio standard to 50 per cent of income (Bramley, 2011; Chen et al, 2010; Stone, 2006). This suggests that when a household spends more than 30 per cent of income on housing it is unaffordable and if it spends more than 50 per cent of it constitutes a serious cost burden. However, like Whitehead et al (2009, p.7) suggest "local circumstances could justify using different figures". Considering literatures from countries like the UK, US, Canada and Australia the 30/50 benchmark was selected as indicator of the potential scale of affordability problems and used as a yardstick for this study. To be precise this means 30 per cent for the lowest 50 per cent of income earners. These measures are used to draw conclusions about the nature and distribution of affordability problems among households in the case study area (see Chapter 7). It uses both quantitative and qualitative data to indicate what these affordability problems are and to provide estimates of the numbers and characteristics of households that actually experience them.

3.0 APPROACHES TO ADDRESS HOUSING AFFORDABILITY

Affordability is 'households' ability to secure housing to rent or to buy, based on their ability to pay either the rent or the mortgage. Or households with an affordability problem are those who cannot meet the market cost of buying or renting housing from their own resources. This implies housing affordability is not an absolute measure as its magnitude is influenced by the approaches taken to its measurement, the assumptions made in the analysis, the data available and involves normative judgement about what is unaffordable (Wallace et.al, 2009). Three approaches can be identified for the measurement of housing affordability: The Normative, the Behavioural and the Subjective approaches (Yip, 1995). The following sections attempt to review these approaches.

3.1 Subjective approach

The subjective approach rests on the assumption of *homo economicus* (Stone et al, 2011). This approach is pioneered by Kearns and Colleagues (1993) in their study of housing association tenants in Scotland. According to Yip (1995) such qualitative assessments are checked against their financial positions as well as other quantitative indicators of the respondents for any anomalies between the subjective assessments and objective evaluations of affordability. The purpose is to make use of the subjective assessment data to determine the threshold level of their housing affordability with the assumption that the individual is the best judge of their situation by using Likert scale from very difficult to afford" to "very easy to afford" (Kearns et al, 1993; Yip,1995; Lau and Leung, 2001).

3.2 Normative Approach

Normative approach defines the limits or norms of affordability in terms of certain thresholds. This approach involves both ratio and residual income measurement of affordability. As a result, two norms are identified. Yip (1995) asserts that the housing cost of a housing of a household should not exceed a certain proportion of the household's income. Bramley (1990a) on the other hand, suggests that income remaining after housing cost is paid for should not be lower than the poverty line. Based on the assumption that different housing affordability approaches yield different results depending on the constituencies behind the approach, multiples types of affordability approaches also exit according to the nature of the problem. Measurement of the ability of prospective homeowners to afford owner occupation forms a crucial part of the empirical investigation of such issues (See Chapter 7). The next subsection discusses these approaches according to the ability to afford homeownership.

3.3 Mortgage potential

When an individual or a household is making a decision to purchase a property one constraint may be their access they require. Individual households' affordability is how much a household can afford on mortgage payments without facing a housing cost burden. Mortgage lending raises two financial issues which are interfaced; an issue of credit–worthiness, and another of affordability. The bankers will not lend unless he is assured of the credit-worthiness of the borrower. Symmetrically, the borrower should not borrow unless he can afford the debt service on the loan.

To assess whether a prospective buyer can afford homeownership Bramley (1990b, p.6) suggests that ''the most appropriate approach seems to be to follow the normal custom and practice of the main lending institutions since they will not lend beyond a certain level newest buyers will not be able to buy beyond that same level''. This concurs with what Littlewoods (1986) refers as mortgage potential[2]. This approach is based on whether or not a household can qualify for a mortgage because without a mortgage could not purchase a house. Although other authors did not use this term explicitly, their studies were based on the same principle in assessing the ability of prospective homeowners to purchase their home. Variations on this method were employed in the UK in the 1980s and early1990s to assess the situation of access to owner occupation (e.g. Littlewood, 1986; London Research Centre, 1989; SERPLAN, 1990; Bramley, 1990a, 1991).

Most mortgage lenders are prepared to advance several multiples of a house purchaser's income. The income multiples of a mortgage loan determine the potential size of the loan, as well as the ratio of household income devoted to paying the mortgage. The income multiples applied for prospective mortgage borrowers have a significant impact on the ability of different groups of people to gain a mortgage. The mortgage potential approach is a variation of the ratio measurement of affordability. In such approach, if the multiple of a household's annual income is larger than the reference house price, the household is deemed to be in affordable situation.

3.4 Behavioural Approach

A behavioural approach to affordability is a viable alternative to the commonly used normative approach which has dominated the measurement of affordability. Yip (1995) argues that the use of a behavioural measurement approach may not possess similar status to the normative approach, but it can provide an independent validation of the threshold affordability level established by the normative approach. This is approach where affordability problem is approached from the actual behaviour of the households. Yip (1995) suggests that it is based on what households are actually prepared to spend on housing, given the socio-economic characteristic of the households.

3.5 Affordable housing

The term 'affordable housing' became a popular term among policy makers and researchers in the 1980s in lieu of the affordability problem of the poor (Lux, 2006; Stone, 2006a). One of the biggest problems facing low income households is finding affordable and appropriate housing. However, it has become very difficult to clarify the true meaning of the term 'affordable housing.' Numerous studies have been undertaken in the developed world with different understandings of the term and working definitions (MacLennan and Williams, 1990; Freeman et al, 1997; Chaplin and Freeman, 1999; Whitehead, 2006; Yates and Gabriel, 2006; Yates et al, 2007, 2008). The term means different things to different people (Salama and Alshuwaikhat, 2006; Miles et al, 2000). It has been used to refer to alternative forms of 'public', 'social' or 'low cost' housing. Further, it can cover any low cost housing regardless of

[2]Mortgage potential is defined as a multiple of a household's annual income which is assumed to be the maximum loan the household can borrow from a lender (Littlewoods, 1986; Yip, 1995)

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tenure (Yates et al, 2005). The concept omits the central questions of who can and cannot afford housing (Stone, 1994) and so there is ambiguity.

Definitions come from different jurisdictions and differ across various policies, planning, and research contexts in the way the term is used (Gurran et al, 2007). Many define the term according to their understanding and configuration of their needs in the local context which covers a spectrum of outcomes such as low cost and subsidised housing (Centre for Housing Research, 2004). For instance, Gabriel et al (2005) suggest affordable housing as lower cost housing than prevailing market price to meet up with the minimum affordability requirements of low-income people. 'Affordable housing' is also used to describe housing which is appropriate for the needs of a range of low and moderate income households; and priced so that households are able to meet other essential basic living costs (Gurran, 2008; Milligan et al, 2009). There are therefore many definitions of affordable housing but any definition of affordable housing must relate to the local housing market. Similarly, there are many different types of affordable housing, which offer different solutions to meet the needs of different people in both developed and developing countries. The next subsection presents these different types of affordable housing available.

3.6 Forms of affordable housing in developed countries

Affordable housing may have different forms, depending on national and local conditions. The countries have many similarities in their economic and housing provision systems as well as some significant differences. These determine their housing conditions and access to affordable housing. The USA, UK, Netherlands, France and German Federal are highly developed industrial economies (Hallett, 1991). The differences in housing condition across countries reflect the legacy of past policies, institutional division of responsibilities for the provision of affordable housing as well as housing preferences and choices (Tsenkova, 2009). Each country has forms of housing that are broadly designed to satisfy the needs of households who are unable to compete in the market place for housing of an acceptable standard (UN-Habitat, 2009). There are a range of definitions of affordable housing that span a variety of housing types and varying levels of government involvement, from subsidized rental housing to publically-owned affordable housing. Based on the above definitions (see section 2.4), affordable housing in these countries includes social rented dwellings, low-cost ownership and shared –ownership (UN-Habitat, 2009).

"Low cost home ownership is sometimes referred to as a form of intermediate housing that bridges the gap between low cost social rental housing and higher cost owner occupied housing. Intermediate housing is a term that is also used to identify rental housing that is intended for households that have higher incomes than those in social renting but who still are unable to afford adequate accommodation in the housing market." (UN-Habitat, 2009, p.2). The clientele base for these houses varies among countries. Scanlon and Whitehead (2008) and UN-Habitat (2009) posit that in some countries it was a tenure for the very poor and in others it is meant for low-wage families or the middle classes, and elsewhere they are for very poor. Central or local governments and other stakeholders like non-profits associations and foundations, public or private are key providers of social housing in these countries. Despite such houses are meant to be affordable, they are not necessarily intended to house only the poorest households (UN-Habitat, 2009).

3.7 Affordable housing in the context of self–help or self–build housing

Self-help housing has very different social and economic significance in the developing and developed countries (Mathey, 1992). It is traditionally a process of delivering affordable homes in many parts of the world (Oluwole and Akunnaya, 2013). Usually, such housing is referred to by different names and the concept of self-help housing is broad ranging from 'self-built', 'self-managed, incremental housing, a Do-It-Yourself (DIY) starter house, a phased-development house or owner-driven house (Mathey, 1992; Barlow et al, 2001; Peter and Ayora, 2011). For simplicity, the term 'self-build housing' or 'self-help' is used in the study to refer to "the process of house construction by individual families general of a spontaneous type with no incentive, permission or assistance from state entities" (Mathey, 1992, p.311).

With the self–help approach, households can get a foot on the housing ladder more easily as the total cost of a home is much less than buying from one of the big house developers (The National Self Build Association, 2008). However, literature comparing or relating it in the contexts of both developed and developing world is thin. Harms (1992, p.33) suggests that "separate realities and separate debates seem to exit for these phenomena". This is due to that fact that the societies, and within them the historic development of housing production and the state housing policies vary greatly not only within the developed countries but also within developing countries. The practices of self-help housing can mean extremely different configurations in the field (Mathey, 1992). They are varied in specific ways according to the different political and economic constraints in different countries (Zhang et al, 2003). Furthermore, "different interest groups relate to it and are affected by it in various ways and initiation of different

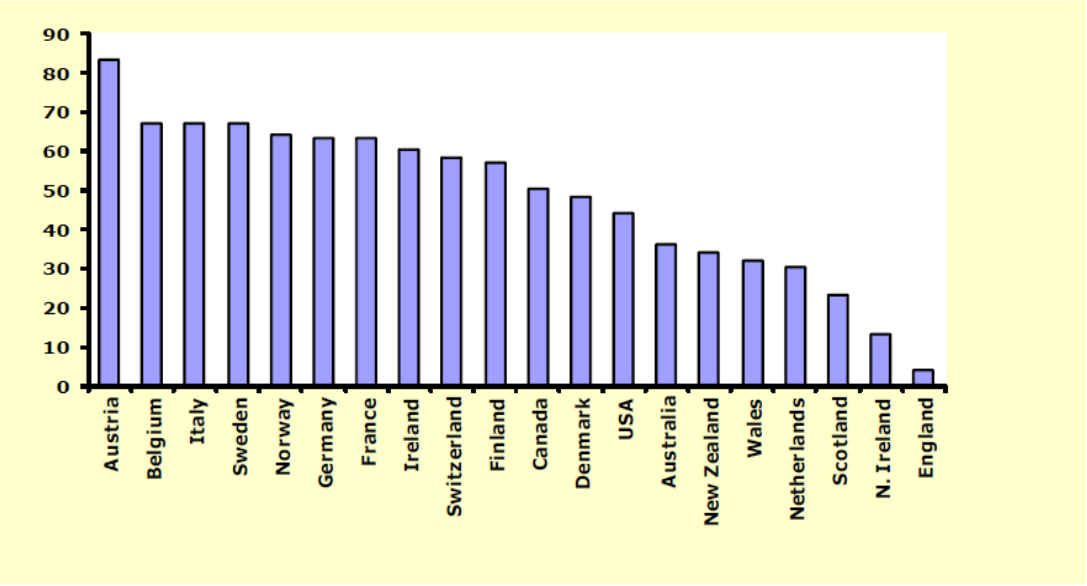
forms is historically associated with specific economic interests and political power relations in crisis times" (Harms, 1992, p.34).

In both developed and developing countries, self-help housing occurs in three distinct forms:

- "Self–construction of mostly individually built and owner-occupied family houses which occurs in rural areas and on the outskirts of cities;
- Self-help in terms of group organisation for the modernisation of older city buildings;
- Self-help in new buildings like terraced houses or multi-storey buildings with a technical separation of a structurally determined building frame and varying possibilities of self–help in the finishing of the flats or houses" (Harms, 1992, p.40).

The context considered in this chapter is the first one. Quantitatively, this type is dominant in both developed and developing countries. For example, according to the National Self Build Association (2008) in every other European country far more homes are built via the self-build route. As indicated in Figure 3.2, the UK delivered about 10 per cent of its housing stock via self- builders in 2010; in many European countries more than half of all homes are built this way. The USA, Australia and New Zealand also build a much higher proportion than in the UK (See Figure 3.2).

Self-build as a percentage of New Housing in Key Countries 2010



Source: AMA Research, 2011

It is the only form of self-help in the housing system that is officially and legally recognised and supported with the aim of making home ownership accessible for households who otherwise could not afford the mortgage payment, or in other words, could not buy a house outright. In developed countries self-help housing on a large scale is rare. In response to the inability of governments to deal effectively with the overwhelming demand for housing, self-help housing has become a favourite formula and a feasible solution to meet the housing needs of the urban poor in the Third World. "Self-help, therefore, was regarded as housing that was 'affordable', relative to the size and stability of existing income over the short term and the household life-cycle" (Jones and Datta, 1999, p.12). Last twenty years, self-help housing have been much in evidence and are becoming the predominant if not the only form of low-cost housing provision in many developing countries. While self-build housing is more prominent with persons with low income, in the developed countries, the rich and privileged undertake such building (The National Self Build Association, 2011). In essence, this approach to housing agrees with the bible text: "God helps those that help themselves" (Marcuse, 1992, p.15). Against this background, the next subsection provides a short characterisation and some further reference of self-help housing.

4.0 OVERVIEW OF SELF-BUILD AFFORDABLE HOUSING OR OWNER–BUILT

For thousands of years' people have tried to build their housing themselves. This means that self–build is not a new idea (Burgess, 1982); it is the oldest and most primitive form of providing shelter (Mathey, 1992). In particular, the urban poor in developing countries have relied on self–build housing in meeting their housing needs. A reliance on the self–built approach became the low income housing policy agenda of the World Bank following the initiatives

and influences of Abram (1964), Mangin (1967) and Tuner (1967, 1977). As a result, by the end of 1980 self–built housing initiatives were promoted in 110 cities across the world (UN-Habitat, 2008). Many advocates claimed that this housing is not synonymous with cheap housing (Datta and Gareth, 1999) but, "practical and multi-faceted method of creating affordable and appropriate housing by reducing construction costs through the use of cheap building labour and inexpensive construction materials" (Peter and Ayora, 2011, p11). By using cheaper materials with the intent to reducing the cost of construction, Williams (2005) suggests that this actually results in a substandard quality building. The process lacks proper design and a planning stage and thus results in many potential transformations of the house during its lengthy construction period. Furthermore, the outcomes often fail to meet minimum safety requirements for construction and are built in locations lacking basic infrastructure. In its strictest definition, it is where few people or one-person design(s), purchase(s), construct(s) and project manage(s) the entire construction by themselves (AMA Research Ltd, 2011).

4.1 Approaches to self-help housing

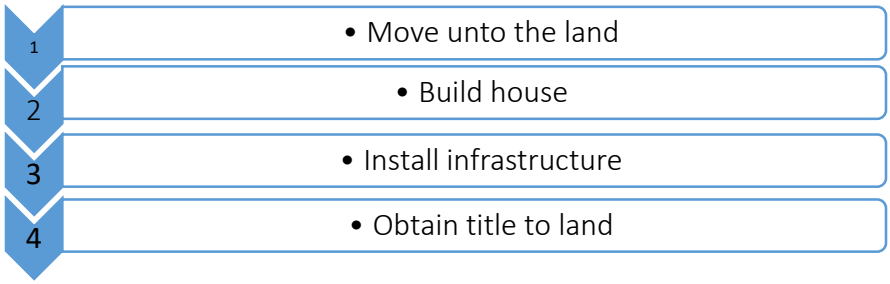
In line with a household's affordability many people with low incomes in developing countries provide their own shelter independently and incrementally. In fact, in the cities of most developing countries, incremental building accounts for 50–90 percent of residential development (Ferguson, 1999; Smets, 1999). In the Philippines and Mexico, 93 and 70 percent of owner-occupied houses respectively have been built through an incremental building process (Ferguson, 2004). UN-Habitat (2011a) reveals that 50 percent of the population in Africa own their house through an incremental process, and suggest that this mode of housing process is affordable at the household level. As a realistic approach to meeting the housing needs of the urban poor incremental housing approaches became popular in the 1970s and1980s. During that period a number of projects were built as a test to lower costs in the production of housing to make it affordable to governments and low-income groups.

While high income earners use their resources to accommodate themselves through buying formal housing outright, the middle and low incomes earners finance their own construction as their personal needs dictate and financial circumstances permit. In fact, the mode of housing fits the livelihood and conditions of the poor (Ferguson and Smets, 2010). Furthermore, most of these approaches are supported through micro-finance, sweat equity, individual and group saving, loans from family and friends windfalls, or remittances from family living abroad etc (Ferguson, 1999; Centre for Affordable Housing Finance in Africa, 2011). In addition, the main source of building materials and other inputs such as land comes from the informal sector, and local or micro-suppliers (Giddings, 2007).

UN-Habitat (2011a, p.46) points out that it depends on the financial capacity of the households and the end result is produced at a price that "profit-driven contractors would be hard–pressed to achieve". For this, the quality of the housing output and outcomes are compromised to suit the financial affordability of its owners (Rust, 2008). As a result, construction quality is sometimes questionable and infrastructure services often lag. Incremental housing can be seen as a phased approach by which a household progressively improves their housing situation to ultimately achieve adequate housing (Smets, 1999).

Essentially incremental housing starts with land usually in the form of a surveyed or irregularly occupied plot. Greene and Pojas (2008) suggest that incremental housing is an inverted version of the formal process of building and financing. Procurement processes for incremental housing take place in the opposite order of those in the formal sector (see Figure 3.3). For this approach, Greene and Pojas (2008) characterise the construction process as taking place in three phases: access to land, construction of a basic infrastructure and then improvement of the dwelling. These processes have been concurred by Biitir (2008) and demonstrated in Figure 3.4. According to Greene and Rojas (2008) and Meikle (2011) such houses often take an average of 8-10 years to complete as they are developed progressively sometimes for example floor by floor or room by room.

Order of procurement processes for self- help housing

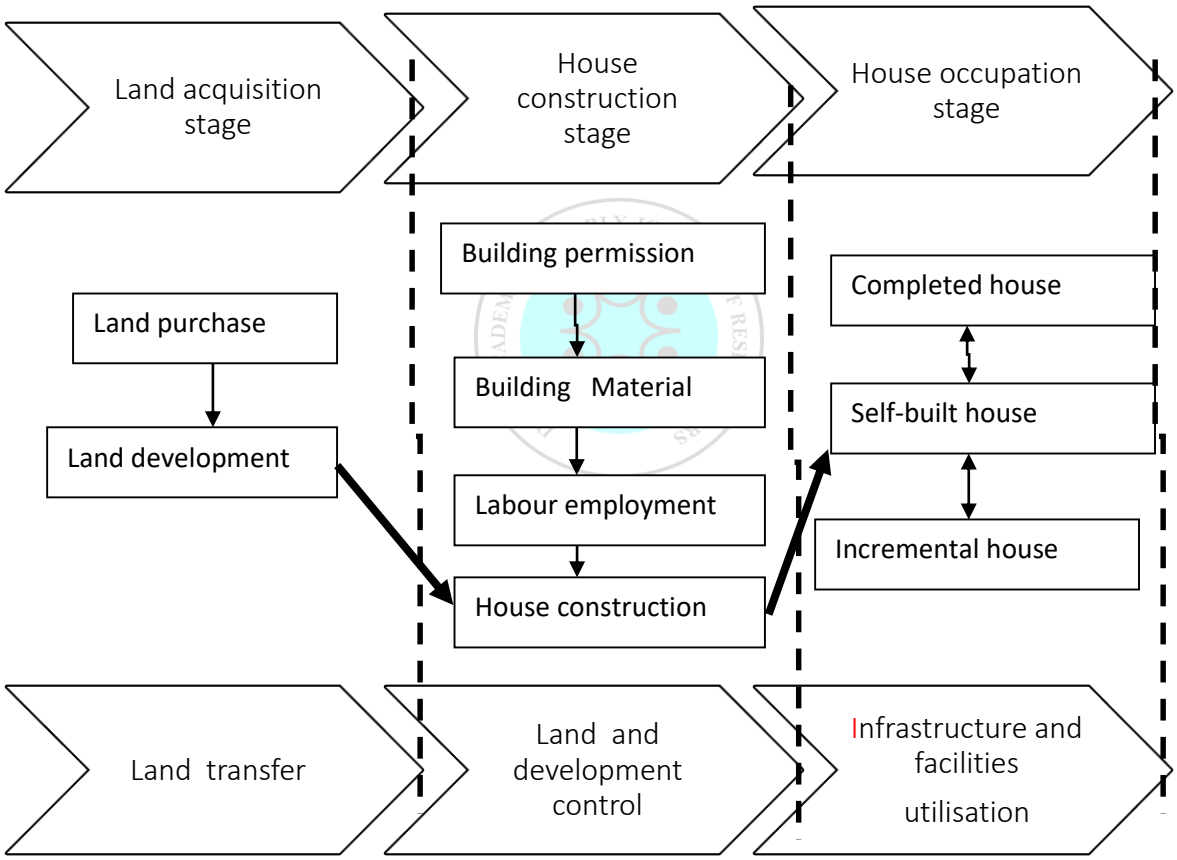


Source: modified from Wakely and Riley (2011)

In most cases, these houses occupied long before the entire building is fully constructed without applying for occupancy permits. These units are also often constructed on land that is inadequate for residential use; are located within incomplete and unauthorized land; lack secure land tenure or construction permits; or fail to meet the construction standards that ensure the safety and sanitation of the houses (Greene and Rojas, 2008). In terms of the cost of construction, incremental building reflects the resources purchased and the process involved as well as market conditions (Meikle, 2011). Although this approach is household-driven rather than a developer-led building process (CHF International, 2004) the houses are built by small contractors, local artisans and labourers employed by the house owner. The housing takes a variety of forms (UN-Habitat, 2011a). Due to technical and financial constraints, incremental houses have generally been limited to structures not taller than three stories. The majority of incremental homes are built in the form of compound houses, detached, semi-detached dwelling and two storey detached.

In the case study country and city selected for the purposes of this study more than 70 percent of all houses are built this way (Anderson and Beck, 2012). The research focus is therefore on self-build affordable housing and the next sub section provides components of self–build housing.

Processes of self-help housing



Source: Modified from Biitir (2008)

4.2 Components of self-build affordable housing

Housing is understood to be holistic and a multi-dimensional concept (UN-Habitat, 2010) and the term 'housing' in developing countries is used as a 'verb' because households perform most of the construction tasks themselves (Ferguson, 1999). Given that the self-developer has to gather the housing inputs such as land, materials, infrastructure and the finance, the efficiency of incremental self-build housing in terms of its ability to provide housing in adequate and at an affordable cost depends on these factors. Self–building housing and affordability is therefore principally determined by the cost of accessing land on which to build, acquiring building materials and hiring workforce/labour if needed etc to establish a rudimentary house. These implied that the occurrence of self-help is

influenced by the labour market, building materials supply, financing, building permission etc. Hegedus (1992, p.219) argues that "the extent to which these become dominant factors depends primarily on housing policy, and on the social and economic conditions of the individual households".

UN-Habitat (2011a, p.34) argues that, "irrespective of the availability of the other inputs required for housing delivery, the cost of land is an important determinant of housing affordability". It follows that, "the selection of the right land for incremental housing development is crucial to its success" (Wakely and Riley, 2011, p.3). Ferguson and Smets (2010) suggest that, the order of steps may vary from one households' construction process to another. Similarly, Marcuse (1992, p.18) argues that ''the route to housing is an activity of individual users, once their own needs are met, the logic of their continued involvement transcends self-help and must be handled on a differently organised basis''. The process by which a self-build construction is started can be more complex than the decision to purchase conventional housing (Barlow et al, 2001). A lot of experts argue that process follows a linear value chain that must start with securing legal tenure (Fin Mark Trust et al, 2008).

As suggested by many authors, incremental housing begins at its most elemental with the land (Hegedus, 1992; Chávez, 2009). Furthermore, access to land is largely dependent upon the availability of land in different land markets in the locality in which the construction is taking place. But research indicates that a range of land tenures and property right exists across the developing world (Payne, 2001). Similarly, to pay for land, labour costs and building materials, housing finance become necessary because a house is too expensive an investment to be paid for in cash. As a result, Hegedus (1992, p.219) concurs that in the case of self-building, "the possibility of housing finance is important" and access to financing is a crucial element for the success of incremental building. With the importance of land and finance to incremental housing development the framework of the study focuses on the main issues of access to land, security of tenure and access to finance. These elements are discussed in detail in subsequent chapters and the main purpose here is to provide information on challenges holding back the growth of the self-build housing sector.

4.3 Costs and affordability of self-built housing

Cost, finance and affordability are considered as three interrelated components of the production and consumption of housing (Ramirez et al, 1992). The reasons many owners in developing countries build their own houses are practical finances as they intend to save money. The self-build labour input helps to reduce the cost of the house. Self-administration of the building process is also considered the most important aspect of the self-built approach- resulting in additional saving (Meffert, 1992). Mathey (1992, p.205) suggests that ''apart from the labour element, the cost of land cannot be lowered, building material tends to be more expensive if bought in small quantities''. These suggest that self-help housing does not principally reduce the cost of houses for the users, and may even increase the cost. As a result, Fiori and Ramirez (1992, p.26-27) suggest "valorisation of land plots in excess of costs to the user are all things that - beyond what and how people can afford - have important implications in terms of users' ability to recover the costs of housing (a central issue in the self–built housing)".

5.0 CONCLUDING REMARKS

Our discussion in this chapter has emphasised the importance of distinguishing the concept of housing affordability and the means by which that concept is measured. There are grounds for saying, then, that affordability is virtually undefinable concept and certainly cannot be neatly or simply understood in terms of a fixed percentage of income. The chapter confirms that multiple housing affordability approaches are used to measure and assess housing affordability. Each approach has its own definition of affordability, causing varying viewpoints on what is to be considered affordable or unaffordable. This chapter reviews the common methods of calculating housing affordability and links these methods to the Kumasi city's housing market discourse (see chapter 6).

The paper draws attention to the conflict between the conceptual clarity of the affordability and affordable housing. In this chapter, it was revealed that housing affordability can be distinguished from the term "affordable housing". In the context of this study, "affordable housing" is often used as an alternative to terms such as "low cost" housing. In the context of affordable housing, attention was concentrated upon the effectiveness of self-help as a means of providing adequate shelter to low income households.

Self-help housing has been very much in evidence for over twenty years becoming the predominant if not the only form of low-cost housing provision in many developing countries. The chapter demonstrated that self-help housing has very different social and economic significances in the developing countries. In this chapter, process, principles and practices of self- help housing are examined which it was revealed that self-help housing participants reduce the cost of their homes through the "sweat equity" of their labour.

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