Developing Country Studies
ISSN 2224-607X (Paper) ISSN 2225-0565 (Online)
Vol.4, No.6, 2014

Overview of Self-Help (Self-Build) Housing Provision in Ghana: Policies and Challenges

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Abstract
The provision of housing in developing countries is usually faced with challenges such as inadequate funding, policy inefficiencies, lack of political commitment among others. In Ghana, these challenges have resulted in the significantly poor development of the housing sector with individuals embarking on self-built housing projects to meet their shelter needs. Unfortunately these self-builders are faced with numerous challenges that impede the successful completion of their housing projects. Though the contribution of self-build housing is significant to the country's housing stock many self-build housing projects are left uncompleted. The aim of this paper is to establish the factors affecting the success of SBHPs in Ghana. The methodology adopted is mainly a critical review of relevant literature and analyzed mainly based on inductive thinking and analytical creativity. Nine (9) factor groupings were established which include; Self-builder related, Development and Planning Regulations related, Land and Tenure-related, Finance and Cost related, Building Planning and Design relateds, Material and Equipment related, Labour related, Supervision and Management related, and External related.. Further investigation of these factors was recommended to establish critical factors for consideration in the design of a framework aimed at enhancing the contribution of self-build housing to the housing stock of Ghana.
Keywords: Self-help, Housing provision, Policies, Challenges, Ghana

1 Introduction

Over the last five decades Ghana, like many developing countries, has not experienced any significant growth in the housing sector (Arku, 2009; GSS, 2010; Kwofie *et al.,* 2011). The housing deficit continues to increase acutely (now at 1.7 million units) (GSS, 2010) contributing to the already poor global housing situation. The increasing urban population in cities and towns is expected to contribute to the slum problem at a projected population of 1.4 billion by 2020 (UN-Habitat, 2006). Unfortunately, the low to moderate income groups form the bulk of this projection saddled with difficult socio-economic challenges (Ankrah, 2009; Fergusson, 2008). According to the UN-Habitat (2006), 2.6 billion of the world's population live on less than 2 dollars a day. Soliman (2012) interpreted this to mean that two out of every five persons still lack basic goods and services such as shelter to live decently. This is bound to even get worse following the skewed growth of cities in developing countries (Adeniyi, 1974; Ankrah, 2009; Soliman, 2012). In fact, Adeniyi (1974) and Arku (2009) correlate housing conditions and availability to the living standards, social harmony, safety and security of individuals in the society. The inadequacy of housing globally and for that matter Ghana, continues to be a strain on the general well-being of the populace and progress in development.

The UN-Habitat (2011) estimates that more than half of Ghana's over 24 million people live in urban areas which mainly include Accra, Kumasi, and Sekondi-Takoradi. In earlier reports (UN-Habitat, 2003; 2006) it was estimated that the number of slum dwellers in these cities will increase from 5.4 million to 7.1 million by 2020. Housing in Ghana is therefore described as crowded with 90% of the housing stock in the category of informal (built by dwellers) while households are said to dwell in rooms rather than houses (UN-Habitat, 2011). Indeed, this is compounded by the poor and inadequate supply of houses particularly by various governments over the decades (Akuffo, 2006; Bank of Ghana, 2007; Konadu-Agyemang, 2009) leading to the current housing crisis in the country. To this end many Ghanaians therefore engage in the provision of residential housing projects through the self-build approach to meet their housing needs.

The main aim of this research is to review housing provision in Ghana with a focus on policies on *self-build* and *self-help* housing approaches in order to establish challenges affecting the self-build housing process in Ghana. The paper highlights self-build/self-help housing contribution to the housing stock of Ghana over the last 50 years especially among the masses of the country's ever growing population. The rest of the paper is structured as follows; section two presents the methodological context of the research anchored mainly on exploratory methods. Section three presents a brief narrative of housing provision in pre- and post- independent Ghana in the context of the housing crisis the nation contends with today. Section four discusses policy interventions regarding self-build/self-help housing in Ghana. Challenges that act as obstacles emanating from policy deficiencies and current social, economic, cultural as well as political forces are presented in section five. Issues bothering on the way forward regarding self-build/self-help housing approaches are presented in the conclusions as section six.

2 Methodology

The methodology adopted for this research is predominantly exploratory in nature, reviewing and discussing relevant literature. Exploratory research is usually conducted to explore an area or problem in order to explore the feasible opportunities for understanding the problem and to conduct further research (Kothari, 1985; Dawson, 2002; Kumar, 2005; Saunders *et al.*, 2007). An in-depth analysis of the relevant literature sought to establish policy orientations on housing provisions in developing countries, especially in Ghana, highlighting successes and failures. The approach is basically qualitative (inductive) anchored on critical thinking and subsequent exposition of the subject of self-build housing interventions and concepts in the housing sector of Ghana.

3 State of Housing Provision, and Policies in Ghana

Housing Policies of Colonial Ghana (Gold Coast; 1900-1956)

Housing provision in Ghana can be traced back to colonial times when colonial governments in the early 1900s could not ignore the impact of poor and unhealthy living conditions experienced by dwellers in Accra and Kumasi (Tipple, 1987). Arku (2009) elucidated that by the early 1920s, deplorable housing and environmental conditions claimed lives of the native people especially in old settlements of Accra. Thus, in 1923 the government of Gordon Guggisberg introduced the 'Dispossessed Persons' Housing Schemes' to assist locals dispossessed of lands due to government projects with loans to support building materials acquisition for building new dwellings. The policy goal was to serve the immediate humanitarian needs of the time while enhancing the implementation drive of national economic development projects (Konadu-Agyemang, 2001; Arku, 2009). This scheme however in 1933 was halted because of its high expenditure after serving only one hundred and eighteen loans totalling £9,280.00. Arku (2009) argues that even though the initial motivation of Guggisberg's government intervention in the housing sector 'was social, it was to a large extent, political'. Thus investing in housing therefore was important if only economic and political gains were associated with it and not just social benefits. This is buttressed by Takahashi (2009) who asserted that housing is often regarded as a social cost and seldom incorporated into national goals, since most governments of developing countries focus on political and economic milestones.

In 1943, the *Development Plan* of Governor Allan Burns, ranked housing as a priority allocating 6% of the total budget of the plan (Arku, 2009). This budget of £800,000.00 was to cover construction cost of houses using mostly locally available materials for the three-, two-, and one-bedroom dwellings under *Scheme A* (Konadu-Agyemang, 2001; Kwofie *et al.,* 2011). The concept of estate housing was utilized under this policy targeting small income earners saddled with housing inadequacies in the large towns. *Scheme B* under the policy targeted Town and Council Housing where financial aid was provided for house construction in Municipal areas of Accra, Kumasi and Sekondi-Takoradi. Arku (2009) observed that housing was given a social priority intertwined with politics and economics as motives to promote stability and encourage savings as well as private investment.

According to Arku (2009) *progress reports* of colonial Ghana revealed that housing remained highly on the agenda especially in the 1951-1958 Development Plan taking 'the view that adequate housing and an efficient building industry are essential for economic development'. Hence housing was allocated 6.7% of the total budget and ranked as the fourth most important item on the development plan. This development plan was quite comprehensive in nature. Its distribution included the following; Accra Re-housing Scheme (7.5%), Subsidized Housing Scheme (38.4%), Village Improvement & Rural Housing (5.0%), Re-Housing Connection with Slum Clearance (8.5%), Plant and Export Work (1.0%), Community Center & Housing Estates (0.4%), Railway Housing Estate (5.9%), and Housing Loan Scheme (33.4%). Arku, (2009), revealed that the two major consumers of the allocations were Subsidized Housing Scheme and Housing Loan Scheme which targeted individual families totalling 71.8% of the £5,985,000.00. The plausibility of this approach cannot be overemphasized considering the benefits associated with it.

Even though the plan was emanating from government the priority was to empower citizens with financial support to meet their housing needs. This philosophy was supported by Colonial Office advisor on Housing, when in a speech in 1954, he advocated for homeownership by families as a necessity for the promotion of social harmony, safety and security (Atkinson, 1960 cited in Arku, 2009). The two schemes based on Subsidies and Loans gained ground and support from John Turner's concept of housing provision through the *self-help* method. The UN Technical Assistance Programme/Mission's investigation on housing problems of colonial Ghana recommended the 'roof loan scheme' and mortgage bank aimed at 'creating financial access by low-income workers, encouraging self-help' housing (Arku, 2009). Harris and Giles (2003) noted that the UN Mission indirectly recommended government to act as a 'facilitator' in promoting housing production and financing by individuals through the *aided self-help* concept. Sadly, these propositions could not make any significant contribution to the housing needs of colonial Ghana.

Housing policies of Post-Colonial Ghana (1957-present)

President Kwame Nkrumah led the government of post-colonial Ghana to continue the pursuit of housing provision especially in the urban centers where housing shortage was rising rapidly (Konadu-Agyemang, 2001;

Kwofie, 2011). Tema Development Corporation (TDC), State Housing Corporation (SHC), and Schockbeton Housing Scheme were established to provide housing mainly to meet the housing needs of government workers in Accra, Kumasi, and Sekondi-Takoradi (Konadu-Agyemang, 2001; Arku, 2009; Nelson and Ayeh, 2009). According to Arku (2009), President Nkrumah's government invested an average of 6.5% of the government development expenditure on housing which was considered fairly high compared to other developing countries' housing expenditures of the time. Arku (2009) alluded that the socialist agenda pursued by Nkrumah produced only 6000 housing units at £44.5 million while the site-and-services projects were mere rhetoric evidenced by the skewed budgetary allocation for public housing projects. Arku (2009) observed that, of the 6 700 self-help housing units planned for execution only 2517 units were constructed. Obviously the government of Nkrumah mainly supported state run housing schemes rather than self-help housing schemes that would promote ownership by individuals and families. The various contributions by succeeding governments are presented in the Table 1.

Table 1: Governments' Housing Policy and Contribution to Housing Stock in Ghana

No	Government	Period	Policy & Contribution	Remarks
1	Joseph Ankrah's National Liberation Council (NLC)	24th February 1966 to 3rd April 1969.	State run TDC/SHC (1 000 units of 2 000 completed)	Achieved only 50% of target.
2	Kofi Busia regime	1st October 1969 to 13th January 1972.	To achieve occupancy rate of 10 persons per house. (targeted 8 000 units)	Achieved only 25% due to lack of funds.
3	Ignatius Kutu Acheampong, National Redemption Council(NRC)	13th January 1972 to 9th October 1975	National Low Cost Housing Committee (projected annual delivery of 2 300 units)	Achieved 5466 units completed and ran out of funds. Encouraged Private sector participation.
4	Hilla Liman, People's National Convention (PNC)	24th September 1979 to 31st December 1981.	- State run SHC built 1 990 rental units and TDC built 228 housing units. - Set up Tile & Brick factory.	Efforts hampered by energy crisis, high cost of oil, decline in foreign/donor funding
5	Jerry John Rawlings, Provisional National Defence Council/National Democratic Congress (PNDC/NDC)	4th June 1979 to 7th January 2001	- National Shelter Strategy (NSS) - Ghana Vision 2020 - Structural Adjustment Programme (SAP) - Economic Recovery Programme (ERP) - National Housing Policy Scheme (1986)	- Policies sought to create 'enabling' environment and framework for housing development for the private sector. - Promoted use of local materials, improved access to land and finance etc.
6	John Adjekum Kuffour, New Patriotic Party (NPP)	7th January 2001 to 7th January 2009	- Initiated 20000 affordable housing units in 2001 to be completed by 2009	No single apartment was completed by the time of exit of the NPP government.
7	John Evans Atta Mills + John Dramani Mahama, National Democratic Congress (NDC)	7th January 2009 to Date	- Initiated institutional housing scheme for service agencies (police, fire service, etc) - Government now in the process of revamping the erstwhile uncompleted affordable housing started by J. A. Kuffour.	Project failed to materialize due to contractual challenges and approval challenges by government and parliament.

(Source: Authors construct from literature; Tipple and Korboe, 1998; Konadu-Agyemang, 2001; Bank of Ghana, 2007; Arku, 2009; Obeng-Odoom, 2009;2010; Kwofie *et al.,* 2011)

It is important to acknowledge that quasi-government organizations such as Social Security and National Insurance Trust (SSNIT) and State Housing Company (SHC) as well as private sector-led Ghana Real Estates Development Association (GREDA) have contributed considerably to the housing stock of the nation though significantly inadequate (Konadu-Agyemang, 2001; Amoa-Mensah, 1999:2003; Ahadzie and Amoa-Mensah, 2010). SSNIT for instance contributed complete flats and apartments targeting the low/moderate income workers

but unfortunately the middle to upper income groups benefited from the project following the diversification of the housing units in 1999 due to operational and some managerial challenges (Amoa-Mensah, 1999: Konadu-Agyemang, 2001). The provision of affordable houses by SSNIT using contributions from workers was designed using the social housing paradigm based on occupancy-rental-arrangement suitable for workers. Unfortunately this scheme was largely unsuccessful. This therefore failed to promote ownership for the lower class and coupled with the general housing shortage, it served only the upper class of the working population who purchased and the over 92% of flats sold in 1999.

The revamped State Housing Company adopted a new approach to meeting the housing needs of Ghanaians. The scheme introduced a counterpart funding from SHC of a 20-25% down payment of the cost of the house by would-be owners and the rest of the cost spread across scheduled time. The turnover of this scheme was largely poor due to factors mainly attributed to difficulties in resource mobilization and consistent flow of funds for the construction (GSS, 2010). It is not surprising that this approach by a state agency is yet another government-driven housing intervention failure. Various literature highlight the inability of government-driven housing schemes to solve the housing problems especially in developing countries (Tipple, 1994; Hardoy and Satterthwaite, 1997; Harris and Giles, 2003; Amoa-Mensah, 2010; Agyefi-Mensah *et al.,* 2011). It is worth noting that following the neo-liberalism of the 1980s a new housing policy known as 'enablement' emerged which provided legislative support to private sector to meet housing needs of developing countries (Takahashi, 2009). GREDA therefore remains the only organized private sector group that is improving the contribution of new housing units to the housing stock of Ghana. Even then the contribution is highly insignificant compared with the rapid growth of the housing deficit in the country (Bank of Ghana, 2007; Ahadzie and Amoa-Mensah, 2011).

GREDA is stated to be contributing only 2500 housing units annually in comparison with an annual requirement of almost 200,000 units (Bank of Ghana, 2007). UN-Habitat (2011) observed that the housing provided by the GREDA, meant to meet the demands of the poor and low-income groups, unfortunately served only the top echelon of society and Ghanaians abroad. This further compounds the housing problem of low to moderate income groups in the country. Mortgage loans over the years have also not served the poor and low-income groups especially from the Home Finance Company (HFC), due to high borrowing cost from the lending market at about 30% interest rate (UN-Habitat, 2011). The UN-Habitat (2011) further explained that self-builders prefer to borrow for business and then use the profit for house construction or borrow from family to support the building process. Low income groups therefore do not have an opportunity of capitalization from the lending market to aid with the self-help housing efforts. Thus, individuals employ the saving culture of accumulating enough funds to use for purchasing materials and paying labour as well as other costs in the construction process (UN-Habitat, 2011). This method therefore prolongs completion of the house(s) as long as 15 years (Ahadzie and Amoa-Mensah, 2010).

4 Self-Help Housing

Self-help housing practice has existed among cultures of developing countries since time immemorial before conventional town planning and housing knowledge (Pugh, 2001; Nnamdi, 2011). Historically, self-help housing schemes became common in developing countries in the 1930s and early 40s prior to the Second World War through the implementation of pilot housing schemes by the International Cooperation Administration (formally Housing and Home Finance Administration), a United States Agency, in Latin American countries (Mathey, 1992; Tait, 1997; Harris, 1998). However, Turner in the mid-1960s was opportune to implement the concept of self-help housing expanding the concept through theoretical writings and thus further shaping and influencing the interest and practice of self-help housing (Turner, 1972:1976; Ward, 1982; Harris 1998; Harris, 2003; Ntema, 2011).

Turner's main view on self-help housing concept is anchored on the *freedom-to-build* of which dweller control is paramount to the success of any housing programme (Harris, 2003; Ntema, 2011) in order to overcome bureaucratic and technological barriers (Ward, 1982). Hence, decisions regarding housing provision for the populace should be controlled by the dwellers in a bottom-up approach, since this will affect the construction process and quality of the houses corresponding to dweller economic, social and cultural characteristics (Marcussen, 1990; Ntema, 2011). This proposition by Turner however reflected more non-Marxist viewpoints that lacked capitalist (or Marxist) ideas of seeing housing as commodity with *use value* and *market value* (Stein, 1991; Soliman, 2004). The Marxist ideas pursued by Burgess (1977) argued that self-help housing becomes cheaper with the removal of paid labour (sweat equity) of the dweller not the absence of profits which relieves the government of some expenses on the poor (Stein, 1991).

Self-help housing has been given various definitions by various authors (Dewar *et al*. 1981; Zhang *et al.*, 2003). For instance, self-help housing has been defined as 'practices in which low-income groups solve their housing needs primarily through their own resources of labour and finance. Ntema (2011) also defined self-help housing as one that allows poor communities to act as key decision makers in project planning, design, management and

implementation with state support in initial project funding, training on project management and oversight during implementation.

Over the decades self-help housing has developed a number of variants that include; 1) aided self-help housing, 2) unaided [laissez-faire] self-help housing, and 3) institutional self-help housing. Pugh (2001) describes aided self-help housing as a housing scheme in which site-and-services are provided with the individual household taking responsibility for the construction of their own housing units. Unaided self-help housing however, refers to a housing concept where the government plays no role, thus individuals or households acquire all materials and labour and finances to complete their housing unit on a plot of land purchased by households. Laissez-faire self-help housing is very common among middle to high income groups particularly in informal settlements with limited state control (Harris, 1991; Duncan and Rowe, 1993). Institutional self-help housing according to Ntema (2011) refers to 'implementation of self-help housing through community-based institutions or groups known as housing cooperatives.

It is important to note that over the years, the government of Ghana's inability to meet the housing supply to majority of its citizens, has led to the proliferation of the self-help housing paradigm in its literal sense. Most Ghanaians have indulged in the laissez-faire self-help housing otherwise described as *self-build* housing, supplying almost 95% of the housing stock in the country while contributing a whooping US$300million per annum to the economy (World Bank, 2010; Ahadzie and Amoa-Mensah, 2011). According to Gough and Yankson (2010) self-build housing is practiced not only by the low income households but also by both middle and high income households. Unlike the Marxists and Non-Marxists ideologies of self-help housing that include some level of government intervention, self-build is described as ' an economic use of labour power, or effort, in the form of the individual or by a group to build a certain project depending on either external or internal help or both, through technical ways without using institutional partnership.

For the purposes of this paper and in the context of Ghana, the definition advanced by Ahadzie and Amoa-Mensah (2010) would be adopted with slight additions. Thus, self-build housing is defined as a gradual piece-meal acquisition of housing inputs such as plots of land, fine and coarse aggregates, other building materials and construction requirements commensurate with the owner's finances, and executed through the use of professional builders and artisans with little or no labour input by the owner or family. The self-build housing process in Ghana is mainly characterized by self-builder who initiates the project, procures and registers the land, procures designs and building materials, and procures development and building permit. The self-builder also arranges for labour with or without supervision. Only on few occasions do self-builders engage sub-contractors on their project sites, otherwise the labour engaged is limited to skilled and unskilled labour sourced from the informal sector.

Even though this model of housing provision is slow, it continues to be the most popular contributor to housing in Ghana (Ahadzie and Amoa-Mensah, 2011). Self-build housing is faced with challenges that include institutional, economic, social, constructional and architectural among others. These challenges have been discussed in detail in the next section.

5 Challenges (Factors) affecting Self-Build Housing Projects (SBHPs) in Ghana

Self-build housing projects (SBHPs) are mostly located in the *sub* and *peri* urban development zones of inner cities influenced by population growth expressed as housing demands fuelled by decentralized economic activities (Owusu-Ansah and O'Connor, 2010), and 'rooted in the desire to realize new lifestyles in peripheral environments and preference for single family houses (Afrane and Amoako, 2011; Gough and Yankson, 2010). The desire for new lifestyle is partly motivated by the rapidly growing middle-class in Ghanaian cities (SDAP, 2010) with increasing financial access and capacity. However, developers such as self-builders face a number of constraints in pursuing SBHPs in these peripheral urban areas. Some of these constraints include; poor access road networks, lack of electricity, lack of water, and lack of adequate security in and around development areas (Afrane and Amoako, 2011).

Even though the Government of Ghana in its Draft National Shelter Policy recognizes the importance of non-conventional approaches to housing delivery such as self help/build housing, has not fully been prioritized (Arku, 2009; Government of Ghana, 2009, pp. 2; Agyefi-Mensah, 2011). Thus, the following constraints continue to affect self-build housing developers in developing countries. These include; lack of viable and accessible housing finance systems, high cost of mortgages, prolonged land acquisition and tenure procedures, land litigation, inadequate house design development, poor house design acquisition procedures, weak implementation of planning regulatory systems, increasing cost of building materials, labour, poor site-supervision, and inadequate *know-how* among self-builders and unavailable personal resources (Asiedu, 1999; Owusu-Ansah and O'Connor, 2006:2009; GSGDA, 2010; Ahadzie and Amoa-Mensah, 2010; Ahadzie and Badu, 2011; Afrane and Amoako, 2011). Unfortunately, as observed earlier, a combination of these constraints affects timely completion of most SBHPs.

These challenges are not peculiar to the Ghanaian self-builder. In fact in other developing countries (e.g. Egypt,

Nigeria, Kenya, Tanzania, Turkey, Jamaica, Philippines, Brazil etc), self build housing projects face similar constraints emanating from sources such as social, economic, environmental, political, technological, resulting in poor quality construction, over-use of building materials than needed, inadequate day-light and ventilation, inadequate infrastructure connectivity, non-customised and standardized designs for all (William, 2006; Biitir, 2009; Soliman, 2012). Other constraints include marginalization of non-land holding families, litigation on land, bureaucracies with land title registration, obsolete building regulations and codes, poor resource management, inadequate duration of contract periods, poor communication between parties, improper planning, inaccurate project cost estimates and high cost of resources for building the house (Kamau, 2002; Rakodi, 2002; UN-Habitat, 2011; Oyedokun *et al.,* 2012; Durdyev *et al*., 2012).

Hensey (1993), Ogunlana (1996), Fugar and Agyakwah-Baah (2010), Aibinu and Jagboro (2002), Koushki *et al.* (2005), Desai and Bhatt (2013), and Marzouk and El-Rasas (2014) in various studies on construction delays established frameworks of factors responsible for delays in construction projects especially private residential projects. To this end the factors affecting SBHPs in Ghana have been adopted from these authors as follows; *Self-builder related factors, Development and Planning Regulations related factors, Land and Tenure-related factors, Finance and Cost related factors, Building Planning and Design related factors, Material and Equipment related factors, Labour related factors, Supervision and Management related factors, and External related factors.* The choice for these groupings is further motivated by the various major phases of the building procurement, development process and institutional requirements for physical developments in Ghana.

5.1 *Self-builder related factors*

Most self-builders in Ghana are individuals or households in the low to middle to upper income groups (Afrane and Asamoah, 2011; Gough and Yankson, 2010) usually with limited knowledge and information regarding building construction and planning regulations (Decardi-Nelson and Solomon-Ayeh, 2009). Other characteristics associated with self-builders include lack of collateral to secure loan, lack of the requisite experience in housing development, and the housing project is usually, for family use and not for sale. Ghanaian self-builders are motivated by ownership of the house being built as property that can be handed down as inheritance for succeeding generations (Asiedu, 1999). In the face of economic challenges, self-builders generally develop a personal saving culture that allows them to accumulate sufficient finance to meet the cost of a portion of the house to be built. Generally, self-builders have very limited knowledge regarding cost saving measures to be employed on their project. Thus capacity empowerment of individuals embarking on housing provision through the self-build concept is necessary to improve the knowledge base of potential developers. This will contribute to reducing cost overruns, over-design, and better management of labour and material resources through their direct involvement on the project design and during construction.

5.2 *Development and Planning Regulations related factors*

In Ghana development control laws and systems such as National Building Regulation 1996 (LI 1630), Town & Country Planning law, Local Government Bye-laws, Act 462 among others, are expected to ensure decency in the built environment. The laws and regulations ensure that physical development is carried out without chaos while promoting the health and safety of users. The implementation of the regulations unfortunately is characterized by inadequate resources in the institutions, long bureaucratic processes, lawlessness and apathy among regulatory staff, communication gaps among regulatory bodies, overlap of roles and responsibilities among regulatory bodies, relatively high transaction cost for permits, and lack of education of the public on planning regulations (World Bank and IFC, 2012; Afrane and Asamoah, 2011; Mahama and Antwi, 2006). These constraints affect the smooth initiation of housing projects by individuals through the self-build concept. Thus, it is common for self-builders generally to ignore the processes of meeting regulatory requirements and move to site without permits to begin construction works (Afrane and Asamoah, 2011).

Unfortunately for developers, when the housing project is at a considerable stage, the now popular *"stop work, produce permit"* statement is written on uncompleted buildings usually by the Building Inspectorate division of the Local Authority. This therefore inhibits the already slow progress of the housing project since the individual will have to pursue the permit requisition at the local authority's offices to avoid harassment and stalling of the project. Regulatory bodies need to work closely in concert, be resourced adequately, and conduct public education on their processes and procedures so as to facilitate the timely response to application for building and other permits in order to enhance SBHP delivery.

5.3 *Land and Tenure related factors*

Studies have shown that land ownership in Ghana is among customary families, and stools (Afrane and Asamoah, 2011; Gough and Yankson, 2010). Self-build developers therefore acquire legitimately-owned land, mostly in the peri-urban areas to undertake their housing projects (UN-Habitat, 2011; Gough and Yankson, 2010). Unfortunately, 'the acquisition processes and procedure, as well as, title registration and pricing' (Afrane and Asamoah, 2011) remain major problems affecting housing development in Ghana. They further added that land acquisition is cumbersome, time consuming and lend itself to bribery, corruption and litigation. According to Afrane and Asamoah (2011) 'land use control and standards, land information system and institutional problems'

further compound the constraints associated with land and tenure for developers. Self-builders are however not immune to these land related challenges in their efforts to develop their housing projects. The need to improve land acquisition and registration throughout the country has seen some level of improvement through the introduction of the Land Administration Project (LAP). LAP seeks to be fair, efficient, cost effective, reduce the time, conflicts and litigation, associated with lands in Ghana (Hammond, 2011). The 'one-stop' decentralized platform will improve self-build housing through the reduction of the bottle-necks in land acquisition and registration.

5.4 *Finance and Cost related factors*

The Finance and Cost factor continue to be a major obstacle to most self-build developers in Ghana. Even though the banking and financial institutions abound in the nation, their priority does not cover the low and middle income households especially in funding housing projects. Most self-build developers hardly own any landed property to be used as collateral for loan acquisition. The Home Finance Bank and Mortgage systems have not worked well in serving the poor and low income groups, thus funding for housing projects come from personal sources (Afrane and Asamoah, 2011; Bank of Ghana, 2007). Poor access to finance and inadequate finance is considered a key determinant of project cost overrun (Olusegun and Michael, 2011). SBHPs face cost overruns attributable to the prolonged completion periods of between 5-15 years, high cost of labour, and cost of materials, as well as inadequate cost estimates, and re-works (Durdyev et al., 2012; Frimpong *et al.*, 2003; Osei-Tutu and Adjei-Kumi, 2009). Finances and cost aspects of SBHPs mainly emanate from poor financial planning on the part of the developer embarking on the project with inadequate cost information. There is the need to improve information availability and access for self-build developers to acquire adequate cost information before embarking on the housing development. As prescribed by Afrane and Asamoah (2011) and Gough and Yankson (2010), innovative financial mechanisms must be developed and tailored to support SBHPs. Unfortunately these prescriptions fall short of developing viable and sustainable financial mechanisms but mainly remain suggestions for further research. There is the need for a financial mechanism to be designed through participatory method with all stakeholders in self-build housing projects.

5.5 *Building Planning and Design related factors*

Building design planning plays a major role in the building cost, quality, life cycle cost, usefulness and more importantly completion period. In Ghana, designs for SBHPs are expected to be sourced from consulting architects and architectural firms, but mostly self-builders do not consult professionals rather less qualified persons (Decardi-Nelson and Solomon-Ayeh, 2009). Though there is very limited literature on design acquisition for SBHPs in Ghana, experience shows that highly trained building professionals are perceived to be expensive and out of the reach of most low-to-middle income households who want to self-build their houses. This therefore weakens the efforts of good design on the cost, quality and time of completion.

SBHPs continue to face the challenge of inadequate design through non-participatory design development processes, architects assumptions on design adequacy, and generalization of self-build design requirements of both designers and developers (Adedayo, 2012; Joshi and Khan, 2010 cited in Agyefi-Mensah, 2011). It is important to note that design plays a major role in meeting the aspirations of households. Design of houses considers sub-factors such as family size, economic status of family, cultural background, religious orientation, environmental and site conditions, security requirements and other technical, scientific and regulatory requirements. As suggested by Adedayo (2012) there is the need for increased collaborative design and public education for SBHPs. The institution of a self-build housing and platform to offer affordable design services to potential house owners who want to embark on SBHPs is another option. For instance, in the UK, self-build housing has grown and gained the requisite recognition to the extent that an access portal has been created to provide support for self-builders with information on building design and other construction resources (NaSBA, 2011). Ghana's self-builders do not have this kind of resource to support the self-build process. There is the need for interventions that will improve specifications in building design for SBHPs in order to promote customization and complete ownership of the spatial and aesthetic attributes of the house.

Inadequate designs, poor technical supervision, and poor quality of building materials affect construction technology employed by most SBHPs. In fact, Tunas and Peresthu (2010) observed that 'uncoordinated and fragmented construction methods and materials' characterizes the self-help housing development and is usually responsible for most of the cost of SBHPs. The choice of construction technology is mainly determined by the materials in use, thus the use of masonry and other insitu techniques compounded by manual labour compromises the quality, increases the completion duration and the cost of construction (Osei-Tutu and Adjei-Kumi, 2009; Adedayo, 2012). The absence of a suitably developed building industry coupled with the rapid introduction of new technologies and materials remain a disincentive to the self-build housing sector. Thus self-build house construction continues to suffer unnecessary delays, poor quality workmanship, cost overruns etc. It is important to note that the utilization of cost effective construction technologies for house construction will enhance self-build housing delivery in Ghana.

5.6 *Labour related factors*

Literature revealed that labour resource and management play a vital role in the construction of SBHPs since it is mostly labour intensive (Thwala, 2013; Durdyev *et al.*, 2012; Afrane and Asamoah, 2011). SBHPs are largely built by both skilled (artisans) and unskilled workforce who undertake various building works on the project. This is estimated to contribute about 35% to the overall building cost and require efficient planning and coordination (Osei-Tutu and Adjei-Kumi, 2009). The constraints created by the labour factor in self-build housing projects in Ghana include; poor quality works, absence of a credible artisanal recruitment framework, absence of organized artisanal groups attributed to poor management resulting from lack of supervision of artisanal practice in Ghana. Even though there is an annual minimum wage, labour cost in the Ghanaian construction industry continues to increase due to inflation and other economic factors (Osei-Tutu and Adjei-Kumi, 2009) thus, mostly subjected to negotiations especially on SBHPs. This contributes to project cost increases, re-works, and delays completion (Durdyev *et al*., 2012). Thus, SBHPs success depends heavily on the labour availability, quality of labour, cost of labour and labour management techniques employed on the project.

5.7 *Materials and Equipment related factors*

Self-build house construction depends heavily on building materials that are largely imported. Materials such as cement, glass, aluminium and *alu-zinc* roofing sheets, paints, tiles, electrical cables, plumbing inputs, sanitary wares have components/whole imported to meet demand in the building industry. According to Osei-Tutu and Adjei-Kumi (2009) building materials constitute 65-70% of the cost of construction in Ghana and remains a huge constraint to self-builders. The weak local industry involved in production of construction materials is still rudimentary and limited in the number of materials to only partly processed timber and precast concrete members (Afrane and Asamoah, 2011; Ahadzie and Badu, 2011; Bank of Ghana, 2007). The absence of a vibrant locally manufacturing industry, coupled with the under developed alternative building materials, continues to the building industry especially SBHPs, with high cost of building inputs. SBHPs are also faced with high transport cost of building inputs, on-site wastage during use, pilfering by workers, and poor storage provisions (Ahadzie and Badu, 2011; Durdyev et al., 2012; Adedayo, 2012). The need for innovative mechanisms to procure and manage building materials for SBHPs cannot be overemphasized since this will improve quality, save time and cost.

SBHP sites experience difficulties regarding equipment availability because of the location of SBHP sites usually located in the peripheries of urban areas (Desai and Bhatt, 2013). Fugar and Agyakwah (2010) observed that even where the machinery are available their operations are often associated with breakdown partly blamed on old equipment and unskilled operators. Desai and Bhatt (2013) asserted that one of the challenges by private residential developers is shortage of equipment and low productivity of some equipment. In Ghana the hire cost associated with hiring construction equipment is a disincentive to many self builders who most often limit the use of machinery as much as possible in order to save cost.

5.8 *Project Supervision and Management related factors*

Most self-build housing developers lack the requisite managerial skills to self manage their construction projects. Even though SBHPs are single projects, they are made up of all the characteristics of a project which include initiating, planning, executing, monitoring and controlling, and closing. Durdyev *et al.*, (2012) suggests that improper planning, inaccurate project cost estimation remain major sources of project cost overrun and delays. As indicated earlier, most self-builders are not building professionals and therefore lack the requisite training; however the opportunity to engage some expertise is necessary for the project success. Supervision also is cardinal to the success of any building project (Ahadzie and Amoa-Mensah, 2010), thus self-builders need some amount of training in project management basics to manage their projects. Self-builders also need to engage experienced artisans or sub-contractors to conduct routine and regular supervision during the construction phase of the project.

5.9 *Other External related factors*

Desai and Bhatt (2013) described this group to contain factors usually beyond the control of the developer, consultant, contractor and/or subcontractors. Some of these challenges to the progress of SBHPs include; effects of subsurface conditions such as high water table, weather impact on construction works, environmental restrictions, effects of social and cultural factors, unavailability of utilities, changes in government laws and regulations, and force majeure in the form of war, riot, strike, earthquake etc. (Koushki *et al.,* 2005; Desai and Bhatt, 2013; Marzouk and El-Rasas, 2014).

In summary, the factors affecting SBHPs in Ghana and discussed above have been presented in Table 2 below.

Table 2: Main and Sub-Factors affecting SBHPs delivery in Ghana

ID	Factor	Sub-Factors
1	Self-builder related	1. Ownership of landed property 2. Level of knowledge on building regulations and laws 3. Level of experience in house construction 4. Level of knowledge on cost savings measures 5. Motivation to own a home 6. Level of household financial capacity
2	Development and Planning Regulations related	1. Inadequate resources among regulatory bodies (RBs) 2. Level of bureaucracies in transactions 3. Lawlessness and Apathy among staff 4. Communication gaps among RBs 5. Overlapping roles and responsibilities among RBs 6. Level of cost of permit transaction 7. Inadequate Public education by RBs 8. Level of infrastructure provisions and access 9. Inadequate decentralised offices of RBs
3	Land and Tenure related	1. Cumbersome land acquisition procedures 2. Lengthy periods to acquire land 3. Lengthy title registration period 4. Inadequate zoning on land use 5. Rising cost of lands 6. Lack of infrastructure in peri-urban areas 7. Lengthy conflicts/litigation on lands
4	Finance and Cost related	1. Lack of mortgage schemes for low/moderate households 2. Poor access to finance 3. Poor financial planning 4. Inadequate finance in the system for housing 5. High cost of labour 6. High cost of building materials 7. Inadequate cost estimates 8. Re-works because of poor quality of works 9. Poor financial planning 10. Litigation cost 11. Cost from waste of building materials 12. Cost of Consulting Building Professionals
5	Building Planning and Design related	1. Inadequate pre-design planning 2. Level of participation in design process 3. Level of consultation of professionals for design 4. Architects' assumptions on design adequacy on SBHPs 5. Generalization of design requirements 6. Lack of interest of architects to take up SBHPs 7. Self-builders assumptions on design adequacy on SBHPs 8. Level of Society's Influence on SBHP design 9. Quality of design details on technology choices 10. Quality of building materials employed in building 11. Quality of formwork for insitu construction activities 12. Level of knowledge on cost saving construction technologies among work force 13. Quality of workmanship 14. High cost of alternative construction technologies 15. High proliferation of conventional construction methods
6	Materials and Equipment related	1. Poor local materials industry in Ghana 2. High cost of most building materials affected by importation 3. Level of availability of alternative building materials 4. High transport cost of materials to site 5. Level of on-site wastage of materials in use 6. Level of thievery of materials by workers 7. Quality of storage provisions for materials

		8. Hire cost of hiring equipment 9. Shortage of equipment 10. Unskilled equipment operators 11. Equipment breadown
7	Labour related	1. Quality of skilled labour employed on SBHPs 2. Lack of a credible artisanal recruitment system 3. Lack of organized artisanal groups 4. Lack of on-site supervision of works 5. Workforce absenteeism 6. Unstable cost of labour 7. Lack of labour management techniques by self-builders 8. Level of labour availability both skilled and unskilled
8	Project Supervision and Management related	1. Level of planning 2. Inaccurate project cost estimation 3. Erratic on-site construction activities 4. Level of coordination of project stakeholders 5. Quality of on-site management of construction activities 6. Level of communication between project stakeholders 7. Level of evaluation of project progress 8. Self-builder's over influence on construction activities
9	External related	1. Effects of subsurface conditions such as high water table 2. Weather impact on construction works 3. Environmental restrictions 4. Effects of social and cultural factors 5. Unavailability of utilities 6. Changes in government laws and regulations 7. Force majeure in the form of war, riot, strike, earthquake

(Source: Authors' construct from literature)

6.0 Conclusions

The main focus of this paper was to establish from literature the housing strategies and policies that were employed by various governments over the years with emphasis on self-help/self-build housing. Existing literature showed that over the last 50 years, governments have largely failed to provide adequate housing for Ghanaians. Approaches such as mass housing schemes, roof loan schemes, site and serviced schemes etc have all failed to meet their intended targets due to various reasons mostly attributed to finance and policy inefficiencies.

The data revealed that present and past governments have considered housing as a major priority on their development agenda. However competing developmental challenges as well as the quest for continuity in power derails the focus and drive to invest appropriate resources for the success of providing adequate housing for the masses especially the low income groups. The paper found that due to the inability of governments to meet the housing needs of the population over the years, a large chunk of the population has taken up the job of meeting their own housing needs. Individuals/households are mainly doing so through the self-help/self-build housing method, commonly described as self-provided housing (see Duncan and Rowe, 1993). In fact, the information revealed that almost 95% of the housing stock in Ghana is supplied through the self-build approach (Ahadzie and Amoa-Mensah, 2011).

The study revealed 9 main factors challenging the successful implementation of self-build housing projects (SBHPs) in Ghana. These factor groupings include; the self-build developer group, regulation and regulatory bodies group, land and tenure group, finance and cost group, building planning and design group, building materials group, labour group, construction technology group, and project management group. These factors were expanded into items as presented in Table 2. The table revealed varied numbers of sub-factors for each main factor highlighting the extent of the barriers affecting the success of SBHPs in Ghana. It is important to note that the discussion also identified that the factors challenging the success of SBHPs do not act in isolation but culminate in the overall effect on the project. Even though the impact of the factor groupings can be isolated by definitive boundaries in the project progress, the collective impact of the factors play a rather significant part in SBHPs and requires further interrogation.

Further investigations shall help identify and rank which of these items in the related-factors are critically responsible for the delays in the delivery of self-build housing projects. This will form a basis for drawing up a workable framework to guide the practice of self-build housing in Ghana, especially among the low-to-moderate income groups of the society. A thorough understanding of the critical factors challenging the success of SBHPs is eminent in eliciting new ideas to enhance the contribution of self-build housing to the housing stock of Ghana.

Acknowledgement
The authors wish to extend their sincere thanks to Architect E. T. Kwofie of Department of Architecture, Kwame Nkrumah University of Science and Technology (KNUST) for the invaluable time spent as well as the salient comments and suggestions made during the preparatory phase of this paper.

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