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ARTICLE

Financing housing in Ghana: challenges to the development of formal mortgage system

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Abstract Although the factors which influence the development of housing finance systems in developing countries have been identified in the literature, the interconnectedness of these factors has not been adequately examined. This paper employs the systems theory to examine the interrelatedness of the factors that influence the demand and supply of mortgage products in Ghana. The paper shows that as a result of supply and demand constraints, the Ghanaian mortgage market is still largely underdeveloped. Supply constraints include capital inadequacy of the banks, inability of the financial institutions to establish credit worthiness of potential borrowers and unfavourable macro-economic conditions which make investment in long-term loans unattractive to the banks. Demand-side constraints include high house prices, high interest rates, unfavourable terms of loan repayments, low income levels and the cultural belief that it is not good to be in debt. We conclude that given the interconnectedness of these factors, a holistic programme that resonates with systems thinking will be required to develop a well-functioning housing finance system in Ghana.

Keywords Systems theory · Housing finance · Land title · Inflation · Ghana

1 Introduction

It is generally acknowledged that an effective housing financing system is essential for providing adequate housing (Leece 2004; McCord et al. 2011). Mortgage financing

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constitutes a significant proportion of credit facilities in many developed countries, and this has enabled majority of the working class to acquire private houses (Freedman 2004). In a sharp contrast to the situation in the developed world, many developing countries do not have well-developed housing finance systems (Groves 2004; Warnock and Warnock 2008). Consequently, personal savings, selling of assets and remittances from relatives abroad have been the main sources of financing for private housing purchases in many Africa countries (Asare and Whitehead 2006). As the funds raised from these sources are not huge, it usually takes more than 10 years to complete the construction of one property (Ibrahim et al. 2002).

Housing finance is a topical issue in Ghana because many people do not have good dwelling places (Acquaah-Harrison 2004; Karley 2008). Anecdotal evidence suggests that, in some urban centres, room occupancy rate is as high as 20 people per room. In view of the acute shortage of housing units in urban Ghana, the government has been encouraging private financial institutions to provide more housing finance to private individuals who want to purchase their own houses. Despite these calls, the formal mortgage market in Ghana is still not well developed (Asiedu 2007). Warnock and Warnock (2008) evaluated the size of the housing finance systems (as a share of GDP) in 62 countries and concluded that Ghana's housing finance, which is 0.5 % of GDP, is the least among the selected countries. Their assessment showed that Ghana's figure is very low, even when compared with the African average of 15.7 % of GDP.

Against this background, this paper relies on the systems theory to examine the challenges to the development of a formal mortgage market in Ghana. The use of the systems theory is very significant because while a number of studies have been conducted on the housing finance systems in both developed and developing countries (Beltas 2008; Warnock and Warnock 2008), there have not been any serious attempts to apply the systems theory in explaining the housing finance system of various countries. By employing the systems theory, this paper demonstrates the interconnectedness of the factors that affect the housing finance system in Ghana and elsewhere in the developing world. It is hoped that the findings of this paper can be relied upon by the government, financial institutions and non-governmental organisations to design effective housing finance system in the country.

2 Literature review on factors that influence housing finance system

Mortgage financing involves providing loans to potential homebuyers so that they can borrow to support their purchases. It arises out of the high cost of houses, which makes it difficult for individuals to pay for the full cost of properties outright from their own savings (Leece 2004). While mortgage products are occasionally granted by state institutions, private financial institutions are usually the organisations that grant mortgage loans to many people in the developed world (Lea 1994; Chinloy and Macdonald 2005). A number of factors determine both the demand and supply of mortgage instruments (see Boleat 1985; Groves 2004; Beltas 2008; Warnock and Warnock 2008). It is often assumed that rising population can lead to high demand for mortgage products to accommodate new households (Asiedu 2007). The concept of affordability is also important in housing finance. While there is no universally accepted definition of housing affordability (Linneman and Megbolugbe 1992), the concept is generally seen as a relationship between house prices and household incomes (Abelson 2009). According to Asare and Whitehead (2006), household demand for mortgage and housing varies with income within and across countries.

The role of government policy in ensuring adequate housing supply and demand has also been adequately discussed in the literature (see Haffner 2008; Hoekstra et al. 2010). According to Boleat (1985), mortgage demand is higher in countries where the state does not provide houses for young people to rent. In contrast, countries with many apartments for short-term rentals are likely to have more short-term tenants than owner occupiers. Megbolugbe and Cho (1993) postulated that demand for mortgage may be determined by whether the mortgage is the conventional type or government-insured loan. In their view, down payments needed to secure a loan may negatively affect the demand for mortgage.

Various government policies and regulations on housing, property ownership and operations of financial institutions tend to influence mortgage markets (Balchin 2002; Chinloy and Macdonald 2005). According to Buckley (1996), proper land registration and well-developed property title right can contribute towards the promotion of a sustainable mortgage market. Macro-economic factors also tend to influence the value of houses and the ability of borrowers to raise money to pay loans. Favourable macro-economic indicators, such as low inflation and stable interest rates, can positively influence the development of the mortgage market (Hills 1991; McCrone and Stephens 1995; Oxley and Smith 1996). On the other hand, a volatile macro-economy, which exposes banks to interest rate risk and credit risk, undermines mortgage financing by banks (Okpala 1994; Beltas 2008). Variations in the factors discussed above therefore explain the variations in housing finance systems in various countries. According to Warnock and Warnock (2008), countries with effective collateral and bankruptcy laws, credit information systems and a more stable macro-economic environment have well-functioning housing finance systems. Our review shows that despite the fact that previous researchers have identified the role of individual factors in the development of housing finance system, there have been little attempt to examine the interrelatedness of these factors.

2.1 Conceptualising Ghanaian mortgage market as a system

Based on insights gained from the literature, we conceptualise the Ghanaian mortgage market as a complex system which is comprised of interacting components. The systems theory is therefore appropriate for discussing the findings in this study. Systems thinking is a general conceptual orientation concerned with the interrelationships between parts and their relationships to a functioning whole (Seddon 2005). According to Harvey (1969), a system is made up of (1) a set of elements; (2) a set of relationships between elements; and (3) a set of relationships between elements (i.e. components) and their environment. Thus, a system refers to a complex of interacting components together with the relationships among them that allow the identification of a boundary-maintaining entity or process (Laszlo and Krippner 1998). The functioning of any particular component of a system gives a feedback to other components. Consequently, if any component is not functioning properly, there will be negative feedbacks to other elements. In this case, interactions are not harmonious, and hence, the entire system will not function effectively (Lockett and Spear 1980).

The housing finance system can be viewed in terms of supply and demand (Warnock and Warnock 2008). In this study, we postulated that these two main subsystems (i.e. supply and demand) are also further influenced by various components, namely the banking industry, the real estate industry and relevant state housing and legal institutions. These components (or lower-level subsystems) are embedded within a wider *politico-economic environment*. We further argue that harmonious interactions among these components will result in a viable housing finance system, while a malfunction of any given component will affect the development of a viable mortgage system. For instance, an effective banking industry will ensure a constant supply of mortgage loans, but these loans can only be taken by potential house owners, if the real estate sector is also functioning properly. Since systems may be embedded in other bigger systems, elements in one level of analysis may be systems on their own at another level of analysis (Lockett and Spear 1980).

A major tenet of the systems approach is that it focuses attention on the whole, as well as on the complex interrelationships among its constituent parts. Structurally, a system is a divisible whole, but functionally it is an indivisible unity with *emergent properties*. There are two important aspects of emergent properties that are important in this analysis: first, they are lost when the system breaks down to its components. For instance, a well-regulated financial sector alone cannot constitute a mortgage market until other elements are operating effectively. Second, when a component is removed from the whole, that component itself will lose its emergent properties. For instance, if banks want to provide loans but the land title registry is inefficient, then obviously the mortgage market will not function. The notion of *emergent properties* leads to the concept of *synergy*, suggesting that the system is more than the sum of its parts. The emergent property of the mortgage system entails a well-functioning banking subsystem, real estate subsystem, government institutions and stable economic environment (Laszlo and Krippner 1998; Seddon 2005).

Our analytical approach is therefore based on the assumption that a complete understanding of the housing finance system requires holistic study of not only the individual constituents (components) of the system but also their interlinkages and the relationships with the wider system. Yet, how can the entire housing finance system be analysed without first examining its components or subsystems? In answering this question, a distinction is made between 'reduction to dynamics' and 'reduction to components'. According to Laszlo and Krippner (1998), both approaches assume that for the sake of brevity, researchers can simplify natural complexity by viewing individual elements in isolation from the complex set of relations that connect them with their environment. However, while the heuristic of 'reduction to components' has led to the accumulation of information about specific subsystems, it fails to reveal their interaction with other subsystems. On the other hand, 'reduction to *dynamics'* approach allows for analysis of interactions of subsystems. In this study, we adopt the 'reduction to dynamics' approach whereby we examine how several components of the Ghanaian housing finance system interact to affect the entire mortgage market.

Given the above postulations, our analytical strategy was to explain the development of the mortgage market by examining factors that influence the demand and supply subsystems.

3 Data sources

Based on our conceptualisation of the housing finance system, data were required on the two major subsystems of investigation, namely mortgage demand and supply. Data on the demand subsystem were obtained from the house owners and potential house owners, using questionnaire survey and in-depth interviews. A questionnaire survey was conducted on a sample of 337 household heads that were randomly selected from two suburbs, namely Regimanual Estates and Dansoman Estates. While Dansoman Estate is an older settlement, Regimanuel Estate is one of the newest well-planned settlements in Accra. The two localities were chosen for the purpose of ensuring that household heads from different backgrounds were interviewed.

Using a simple random sampling technique (see Bryman 2001), 380 houses were selected from the two communities. These houses were then visited by trained research assistants for the purpose of administering the questionnaire. In each house that was visited, the household head answered the questionnaire on behalf of the entire household. When the household head was not available, the next in command completed the semi-structured questionnaire. In situations where more than one household lived in the house, a simple balloting exercise was conducted to select one household head to complete the questionnaire. In all, 337 household heads completed the questionnaire, giving a response rate of 88.7 %. Of the total number of respondents, 196 (58.2 %) reported that they had a house in Accra, though two of these people were not currently living in their houses. The rest of the respondents were either tenants or people living in a house owned by a close relative. All the respondents were asked questions about their perceptions of mortgage instruments. The 196 respondents who had their own houses were asked further questions about how they financed their properties. After analysing the questionnaire data, 18 of the survey participants were given in-depth interviews. These people were selected based on a simple random sampling.

As a way of getting information on the supply subsystem, in-depth interviews were held with three senior banking officials selected from the Home Finance Company (HFC), CAL Bank and the Ghana Home Loans in Accra. These key informants provided information on mortgage products; the procedures of accessing mortgage facilities; and the factors that affect the ability of the banks to give mortgage loans to many customers. Additionally, two officials of the Ministry of Works and Housing were interviewed on government housing policy and regulatory frameworks. Finally, two managers of two private real estate companies in Accra were also interviewed. Secondary data sources were also relied upon in this study. Specifically, data on interest rates and loan amortisation arrangements were sourced. Information on prices of houses and terms of payments was also obtained from some of the real estate developers in Accra. In the discussion that follows, the results from the study are presented.

4 Evolution of the real estate sector and the mortgage market in Ghana

Real estate development in Ghana has gone through several twists and turns. During the late 1950s when Ghana gained independence, the state operated a housing finance scheme for public workers. Under this scheme, a State Housing Corporation built houses that were rented to public workers. These houses were later sold to the occupants under some flexible payment arrangements. By the early 1980s, two state organisations, namely the Tema Development Corporation (TDC) and Social Security and National Insurance Trust (SSNIT), emerged as the main organisations in charge of formal real estate development in Ghana. These organisations operated housing schemes similar to those of the state cooperation.

In the 1990s, a number of private estate developers emerged in response to privatisation and capitalist policies being pursued by the Ghana government. These include Trasacco Valley, Manet, Regimanuel and EMEFS estates. As in the capitalist world, the operations of these real estate developers are guided by market forces and the usual profit maximising behaviour of capitalists. Most of them do not have houses that have already been built for sale. The prospective homebuyer must pay half of the cost of the house before construction works start. When construction gets to the roofing level, he/she is required to pay the rest.

On a few instances when houses have already been constructed, the prospective homebuyer must pay the full value before the house is handed to him or her.

On the other hand, the Ghanaian mortgage market has developed slowly. In its first attempt to develop a formal mortgage system in the 1980s, the Government mandated some state financial institutions, notably the Social Security Bank (SSB) and the Bank for Housing and Construction to provide some form of mortgage instruments to potential homebuyers. However, these agencies failed to achieve desired results (Ayitey 2000). Relying on a loan from the World Bank, the HFC was established in 1993. According to Asare and Whitehead (2006), the initial plan was that the HFC would operate as a secondary mortgage market, acting as a liquidating house for other financial institutions that would participate in granting mortgage. However, the failure of the other banks to participate fully forced the HFC to eventually assume the role of both a primary mortgagee and performing the functions of a secondary mortgage market.

Currently, a few private financial institutions also provide limited mortgage loan to their customers. In all, there are five major financial institutions in the mortgage loan business in Ghana. These are the HFC Bank, Ghana Home Loans, Fidelity Bank, CAL Bank and Stanbic Bank. Each of these banks offers various loan products, which can all be categorised into four main loan categories. The first is the Home Purchase Mortgage, which is used for purchasing new houses. The borrower is normally expected to make a minimum 20 or 25 % down payment of the value of the property, while the bank provides a loan equivalent to cover the value of the property. The loan term is usually for 15 years, and the interest rates are always variable. The second product is the Home Improvement Mortgage, which is intended for renovation of already acquired property. Another product is the Home Completion Mortgage, which can be used to complete a house under construction. The last product is the Home Equity Mortgage, which is used for realising equity locked up in a property. The Home Purchase Mortgage dominates the market (Asare and Whitehead 2006).

A unique feature of the current Ghanaian mortgage market is that it is segmented into two different categories as far as loan pricing and payment conditions are concerned. In principle, there is a separate arrangement for resident Ghanaians who pay in the domestic currency (i.e. the cedi) and another one for non-resident Ghanaians who pay in foreign currency (usually the US dollar). There are also variations in the interest rates charged for both categories. While interest rate on cedi loans is about 30 %, that of dollar loans is 13.5 % variable. In recent years, Ghana has moved towards what can be termed 'dollarisation of loans', whereby both resident Ghanaians and non-residents pay the cedi equivalent of loans specified in US dollars.

5 Assessing the mortgage supply subsystem

As explained in the conceptual framework, the mortgage supply subsystem is a major component of the housing finance system. As stated already, only five major financial institutions provide mortgage loans in Ghana. An analysis of secondary data shows that the total mortgage loan supplied by financial institutions in Ghana is extremely small. Less than 3 % of loans granted by banks in the whole country go into housing finance (Bank of Ghana 2011). The total loan portfolio is too small, even when compared with some developing countries. Sri Lanka, for instance, has outstanding housing finance portfolio of over $1 billion (Moss 2003). Even in Africa, Senegal has a housing portfolio of $150 million, whereas that of Kenya's was about $668 million in 2005. In contrast, the figure for

Ghana as at 2005 was just $21.7 million (Asare and Whitehead 2006). Our in-depth interviews with banking officials revealed that the factors that make it difficult for the banks to supply more mortgage products are interrelated and include lack of collateral security, difficulty in checking the credit worthiness of potential borrowers and economic instability. These factors are now discussed.

5.1 Collateral problems

Collateral security is very essential in any mortgage market. In the developed world, the property being purchased is often used as the collateral but that is not always the case in Ghana. As the real estate sector is now evolving, more than 90 % of Ghanaians construct their own houses by hiring the services of artisans. These people can therefore only obtain loans by providing another property to be used as collateral. Buckley (1996) argued that the property that banks can accept for collateral must be of a high quality. However, some banking officials noted that most of the collateral securities that people want to use are not of good standard:

> Some people come here with pictures of their buildings which they want to use for the loans but the buildings are just not good for the purpose….How can someone present a one bedroom house that was built of only sand as collateral for a loan to build a four bedroom cement house? (Agor, 23 April, 2010)

The poor quality of houses can be blamed on weak enforcement of public institutions and low incomes which make property owners employ 'wayside' artisans and/or use inferior building materials. Even where people have standard property that can be used for collateral, land registration systems in Ghana are so bad that many people have no documents to prove ownership of their property. In fact, while a reliable land registration and well-developed land/property title right system are important for developing a good mortgage market (Buckley 1996; Groves 2004), the system in Ghana is fraught with several problems. Although this study was conducted in well-planned neighbourhoods where acquisition of land documents is relatively easier, only 49.5 % of the 196 homeowners reported that they have complete formal documents on their property. This means that the rest cannot use their property for mortgage for another acquisition.

Some of the respondents who did not have land titles explained that they applied for the documents some years ago, but have still not been given their documents. The land registration process is frustrated by corruption and unnecessary delays. The land tenure system contributes to property ownership crises. Lands are owned by traditional rulers and families. In most cases, the same piece of land may be sold to different developers by different members of the family. The findings resonate with the argument of de Soto (2000) that the lack of acceptable collateral is also a cause of the poor development of the mortgage market in developing countries. As a result of the collateral problems, most of the banks are only willing to lend towards the purchase of new houses that have been built by estate developers. However, these units are too expensive for many Ghanaians. This observation resonates with our initial argument that malfunctioning of any component of a system may affect other components within the entire system (see also Laszlo and Krippner 1998). Here, the failure of the states' land title system provides negative feedbacks to affect supply of loans to potential house owners.

5.2 Establishing credit worthiness of potential borrowers

As a way of assessing the likelihood that a potential borrower will pay the loan, credit checks are essential in any mortgage market (Saunders and Allen 2002; Anderson 2006). According to Freedman (2004), lending institutions in developed countries scrutinise the wage statements, income tax returns and detailed credit reports of any potential borrower, as a way of assessing his or her income. On the other hand, developing countries lack reliable information about a potential borrower's annual income and credit history due to the large informal sector and the lack of credit-checking agencies. In this case, the supply of mortgage is negatively affected by lack of credit-checking agencies. Apart from the non-existence of credit-checking agencies in Ghana, there is no reliable database for vital personal information such as date of birth and residential address. Further, there is no proper address system, and hence, it is difficult to establish the credit worthiness of potential borrowers. Poor documentation of property also makes it difficult to assess the credit worthiness of potential borrowers. As a security measure, some of the banking officials stated that when in doubt, they just do not approve an application:

> We know that our assessments are sometimes not correct but what can we do if we simply don't have the necessary information to decide…. We want to always protect the bank so the best thing is to reject an application when we are unsure of an applicant's credibility (Ofosu, 12 March, 2010).

In the absence of reliable information on potential borrowers, very strict procedures are also applied most of the time and this disqualifies many applicants. These findings are consistent with the arguments by some scholars that inadequate information on borrower affects mortgage markets (see Jaffee and Renaud 1996). This scenario demonstrates how the malfunctioning of one component of the mortgage market affects the overall performance of the system.

5.3 Capital inadequacy of the banks

Even though the banking officials interviewed did not actually mention capital adequacy as a constraint to the supply of mortgage loans, a critical assessment of reports of the Bank of Ghana shows that most banks in Ghana are not able to supply mortgage loans because their capital size is small. This explains why only five of the 23 banks are into housing finance, which requires huge capital. The initial capital to operate a bank in Ghana is GHC 60 million ($ 30 million). Though some of the major banks have more than the initial capital, they still do not have adequate money to finance mortgage loans. For instance, the HFC bank, which is the major provider of mortgage loans in Ghana, has managed to increase its capital (total equity) from GHC 32 million in 2009 to GHC 69 million in 2010 and then GHC 74 million in 2011 (see HFC 2012). Assuming that the HFC Bank will use all its equity to grant mortgage loan for the purchasing of an average house with the price of GHC 140,000 ($ 70,000), it could only give a mortgage loan to purchase only about 500 houses. Here, it can be stated that the weak financial position of many Ghanaian banks is also a constraint to the supply of mortgage products.

5.4 Macro-economic instability

There is no doubt that the macro-economic environment has a significant influence on lending and borrowing. According to the banking officials interviewed in this study, high

Table 1 Trend of inflation in Ghana

Year	Annual average inflation	Year-on-year inflation
2007	10.7	12.8
2008	16.5	18.1
2009	19.3	16.0
2010	10.8	8.6
2011	8.7	8.6

Source Figures for 2007–2011: BOG (2011)

Table 2 Exchange rates in Ghana

Year	Amount of cedi required for 1 US dollar	Amount of cedi required for 1 euro
2007	0.9704	1.4398
2008	1.2141	1.7211
2009	1.4284	2.0484
2010	1.4738	1.9407
2011	1.5505	2.1076
2012 (July)	2.1021	2.2461

Source Figures for 2007–2011: BOG (2011); Figure for 2012: BOG (2012)

level of inflation and high level of the depreciation of the cedi make long-term loans unprofitable to the banks, as the value of the amount declines rapidly. Inflation and interest rates in Ghana have been historically high. In the late 1970s, inflation was more than 100 % but was brought down in the early 1980s, as a result of structural adjustment programs. Even so, the economy is still not stable. For instance, inflation rose from about 14 % in 1999 to 41 % in 2000. Table 1 shows inflation trend within the last 5 years.

As shown in the table, both the annual average inflation and the year-on-year inflation have been fluctuating over the years. Interest rates on loans from the banks have also been very high throughout the history of the country. They were about 45 % per annum in the 1980s. Since the late 1990s, interest rates have declined in response to declining inflation figures, but they are still around 30 % (Bank of Ghana 2006). The domestic currency is also not stable, often depreciating rapidly against the major foreign currencies (especially the US dollar and the euro). Between 1997 and 2007, the Ghanaian cedi depreciated by about 360 % against the US dollar. The depreciation of the cedi in recent years is also quite significant (Table 2).

In fact, the cedi depreciated by about 36 % against the dollar in the year 2012 alone. In order to save their interests in such a volatile economy, estate developers in Ghana often quote prices of their property in US dollars (though buyers are allowed to pay the cedi equivalent), a phenomenon referred to as dollarisation of the cedi. One estate developer noted that if prices are fixed in cedi, then the company would be forced to adjust its prices frequently since the cedi is not stable:

> You know the Cedi depreciates against the dollar on a daily basis. This means that if we fix the prices of the houses in Cedis, then we will be required to change the prices every day. This will not be good for our companies and the customers.… By quoting the prices in the American money [Dollars] we do not bother too much about depreciation of the Ghana money.

Similarly, the top banking officials also explained that it is because of the high level of inflation and depreciation of the local currency that they are forced to use the US dollar as the standard pricing unit of account for long-term loans. They explained that while the unit of account is the US dollar, the actual transactions are carried out in the cedi.

The observation here shows the importance of a system's *environment* to its overall performance. The environment of a system is a higher-order system of which the system being examined is a part and changes in whose elements will bring about direct changes in the values of the elements contained in the system under examination (Harvey 1969; Ackoff 1981). In this context, the behaviour of the financial institutions (especially their unwillingness to grant long-term loans) can be explained as negative feedbacks to the unstable economic indicators.

6 Assessing the mortgage demand subsystem

As explained in our earlier conceptualisations, the mortgage demand subsystem is also very important for the development of a viable housing finance system. In the absence of a reliable data on borrowers, information on mortgage demand was largely obtained from the respondents. As shown in Table 3, of the 196 people who had their own houses in Accra, majority relied on personal savings (43.9 %) to build their houses. Another 18.9 % of respondents relied on remittances from relatives abroad to build their house, while roughly 17 % sold a parcel of land or other family property to build their house. Only 14.8 % of homeowners reported that they had ever used a mortgage facility to finance their house. Thus, as is the case in some developing countries (see Sanders 2005), many Ghanaians still finance their houses through conventional methods, such as remittances from abroad and sale of family lands or personal savings.

A further analysis of the relationship between type of housing finance and occupation at the time when the house owner built the house was performed. The data shows that all the 29 people who reported using mortgage were working in the formal sector at the time they used the facility. Of these 29 people, an overwhelming majority (62.1 %, $n = 18$) reported that they were working in private financial institutions at the time they took the loans. Another 4(13.7 %) stated that they were working with foreign organisations at the time they took the loan to purchase the house. Only 3 of those who used the loan were working in the public sector, and two of them were medical doctors. The in-depth interviews suggest that people in the financial sector are more likely to use the mortgage facility because they are often given lower interest rates on the mortgage. At the time of this survey, for instance, a few of the bankers explained that they were paying as low as 3 % interest rate, while other borrowers were paying as high as 25 % per annum.

Table 3 Mode of housing finance ($n = 196$)

Mode of housing finance	Number/percentage
Personal savings/pension	86 (43.9 %)
Remittances from relatives abroad	37 (18.9 %)
Sale of land and other family property	34 (17.3 %)
Mortgage	29 (14.8 %)
Other	10 (5.1 %)
Total	196

Source: Field survey, 2011

Table 4 Reasons for unwillingness to use mortgage products (multiple responses $n = 240$)

Reasons for unwillingness to use mortgage products	Number of respondents	Percentage
Unfavourable interest rates and terms of repayment	122	50.8
High prices of houses	103	42.9
Low income level	78	32.5
Other factors	27	11.3

Source Field Survey, 2011

In order to understand the willingness to use mortgage facilities in the future, all the respondents were asked whether they would like to use mortgage products in the near future. Of the 141 people who did not have a house in Accra, 44 (31.2 %) stated that they would like to use a mortgage facility to acquire a property in the future. However, only 11(7.8 %) of this group of respondents reported that they were seriously considering applying for mortgage loans within the next two years. Of the 196 people who already had a house in Accra, only 53 (27.0 %) reported that they would use a mortgage instrument, if they were to build another house at the time of the survey. The respondents who stated that they would not want to use any mortgage facility were asked to state the reasons for their responses. As shown in Table 4, nearly 51 % of this category of respondents cited unfavourable interest rates and terms of repayment for their response. Other reasons include high prices of houses, low income levels, complex loan application procedures and the belief that it is not good to be in debt. These factors are discussed below.

6.1 Effects of high interest rates on mortgage demand subsystem

This study shows that high interest rates and unfavourable repayment conditions prevent many Ghanaians from using mortgage loans to finance their houses. The short repayment period (i.e. usually 15 years) and high interest rates (about 30 % for payments in cedis and 13.5 % for payments in dollars) mean that the monthly instalments are very high, and this makes the use of mortgage facilities unattractive. Another factor that makes the loan repayment unattractive is the fact that, in recent years, most of the banks price their loans in US dollars. The carrying out of transaction in dollars implies that each time the cedi depreciates, the borrower is required to pay more cedis for the same instalment.

The problems associated with the high interest rate and transacting business in dollars can be illustrated as follows: a two-bedroom house located in a low-class estate in Accra currently costs $ 65, 000. Assuming that one wants to use a mortgage facility to purchase this property, he/she would first need to make a down payment of 25 % of this amount. To pay the mortgage in 20 years at an interest rate of 13.5 %, the buyer would pay monthly instalment of $ 784.79 (this is based on HFC loan calculator). As salaries are in cedis, any depreciation of the local currency will affect the instalment. For instance, in January 2012, this monthly instalment of $784.79 was equivalent to GHC 2,890.00. In June 2012 (just after 6 months), the same amount was equivalent to GHC 3,750.61. This means that the monthly instalment has increased by 29.8 % within 6 months. The salary of the borrower is, however, not likely to be adjusted within the 6 months. Thus, to the local house buyer, high depreciation and high inflation mean that his or her real income is constantly declining and this further affects his or her ability to demand mortgage loans.

It must be stated that while high interest rates, which is a characteristics of the unstable economy, is a problem, the high initial deposits being demanded are simply not good and that is where the banks could have done better. For some respondents, the 20–25 % of an estate house price is enough to build their own houses. This is captured in the statement of Adu, a 43-year-old pharmacist.

> I prefer to save my own money and build my own house. I once went to the bank and they told me I would get the loan only if I could deposit 25 % of the house price. The two bedroom semi-detached house I wanted to buy is 90,000 USD dollars. If I have 25 % of that amount I can build my own house with it…. In this country, only politicians and people living abroad are able to take these loans.

An official at the Ministry of Works and Housing also believes that the banks are charging too much. He explained that between 2008 and 2011, inflation declined significantly; the policy rate was just about 14 %. However, banks still maintained their high interest rates of around 30 % per annum. The findings here lend credence to the argument of Boleat (1985) that unfavourable terms of loan repayment significantly prevent people from accessing mortgage loans.

6.2 High prices of houses

House prices tend to influence housing demand (see Hoekstra and Vakili Zad 2011). The prices that estate developers charge for their houses make the use of mortgage loans very unattractive to even those in the high-income group. As explained, in view of the land title problems, the banks are normally willing to offer mortgage loans to only people who are willing to purchase new houses that have been built by private estate developers. Yet, these houses are too expensive. For instance, a standard two-bedroom house in Accra is being sold for about $ 65,000. The same property can cost about $ 150,000, if it is located in a high-class neighbourhood. Based on our own assessment, one can spend just about $ 20, 000 to build the same property, if he/she relies on artisans. Many people, therefore, find it irrational to take mortgage loans to buy estate houses.

One estate developer interviewed argued that they are forced to charge such high prices because of the problems they encounter in purchasing land. He explained that there are several land disputes and multiple sales of lands, which increase their cost of building the houses. Another developer explained that high prices of houses are also due to the high level of inflation and depreciation of the cedi.

6.3 Low income levels

Given the high incidence of poverty in Ghana, it is not surprising that low income levels were cited by as many as 32.5 % of the respondents who were not willing to use a mortgage facility. In fact, the daily minimum wage is less than 2 US dollars. With this low level of income, many workers struggle to feed their families. Even many high-level professionals cannot afford to repay a mortgage loan. For instance, to qualify for a loan to buy a two-bedroom house which costs $ 65,000, one must earn $ 2,280.70 monthly. This is far higher than the salary of a principal medical officer or a university lecturer in Ghana. Only a few people working in some international organisations and top managers of a few reputable private financial institutions can afford to repay a mortgage. Thus, similar to the findings of Karley (2008), we have demonstrated the general lack of affordability of mortgage loans in Ghana. Our findings support the assertion of McCord et al. (2011: 398) that housing affordability should be broadly examined 'in terms of house price-to-income affordability, access affordability (deposit gap), purchase affordability (borrowing capacity of households) and the residual affordability measure (repayment burden imposed by mortgage costs)'.

It can be argued also that the poor in Ghana are excluded from the mortgage market. Some of the respondents have stated that they would welcome pro-poor mortgage facilities. In other African countries, these pro-poor products exist for poor households. For instance, in Angola, a human settlement non-governmental organisation worked with relevant state agencies to address the issue of economic exclusion through the provision of microcredit to the poor. The agency also facilitated the securing of tenure rights for the poor (Cain 2007). Similarly, the Mchenga Fund for housing has been helping the urban poor in Malawi not only in the area of housing but also to improve the lives of slum dwellers (Manda 2007). Another example of such microfinance models is the Kuyasa Fund, a South African non-profit microfinance institution that focuses on the provision of loans for use in housing. This scheme was found to be a viable option for improving housing delivery (Mills 2007). In Ghana, however, such pro-poor mortgage facilities do not exist.

6.4 Cultural values

Certain values and beliefs about debt were also seen as barriers to mortgage demand in Ghana. During the survey and in-depth interviews, some people stated that they were simply not comfortable with the whole idea of relying on loans to build their houses. This is related to the cultural belief that people in debt are not hard-working:

> I have heard of this mortgage thing, but I don't like the idea. If I use my own money to build a new house, many people will see me as hard working…..How will people think of me when they hear that I took money from the bank to do this? My father advised us when we were young that it is not good to be in debt so I don't like borrowing money from the bank (Anani, 11 January 2010).

Such cultural issues may not be necessary in the developed world, but are important in the developing world where many family people will want to know how one manages to acquire a new property. Thrift (1985) has noted that analysis of social behaviours must be contextualised, and our findings aptly testified to the fact that the development of mortgage market in Ghana needs to be understood within the unique cultural context and belief systems. These cultural issues are not well documented in the literature on mortgage development in the developing world, but we found them quite interesting.

7 Discussions and conclusions

The findings of this study support our theoretical formulation that the development of the mortgage market can be explained by systems theory. The poor development of the Ghanaian mortgage market is attributable to malfunctioning of the various subsystems that are important for the development of a viable mortgage market. We have demonstrated that negative feedback from the banking subsystem, the real estate subsystem and the macro-economic environment affects both the supply and demand of mortgage products. Malfunctioning of the banking subsystem is evidenced by the fact that most of the banks do not have enough capital to grant mortgage loans. Malfunctioning of the real estate subsystem leads to a situation whereby a significant proportion of houses cannot be used as collateral to obtain mortgage loan. Malfunctioning of state institutions is responsible for land title problems, which affects collateral security and hence access to loans. The wider political economy, which can be seen as supra-system within which the banking and real estate subsystems are embedded, also contributes negatively to the development of the Ghanaian mortgage market. While favourable macro-economic factors such as low inflation and stable interest rates are important for the development of a viable mortgage market (Hill 1991; Okpala 1994; Oxley and Smith 1996), the Ghanaian economy has historically been unstable (Huq 1989; Bank of Ghana 2012). The high level of inflation and depreciation of the local currency, which affect both supply and demand of mortgage instruments, are products of a malfunctioning macro-economic subsystem. The findings here lend credence to the arguments of Moss (2003) that poor housing finance systems in some African countries can be explained in terms of poor performance in the macro-economic indicators.

Based on these findings, we recommend that the government of Ghana must work together with the financial institutions to design better loan pricing and repayment mechanisms. Our findings support the argument that the distinction between various affordability measures can be helpful in solving housing problems (McCord et al. 2011). Instead of only focusing attention on household income levels and house prices, policy makers must find ways of dealing with other factors, such as huge initial deposit and the ‘dollarisation’ of loans in Ghana. It will also be necessary to design mortgage products for low-income households. There are various ways by which equity capital may be raised for housing finance lending to low-income groups (Lea 2005), but microfinance models tend to work in most poor countries. The government of Ghana and non-governmental organisations must therefore work together to design similar mortgage products for low-income households. Reforms in the current land tenure system are also needed. This will reduce the challenges associated with land acquisition for housing development (see Beltas 2008).

Consistent with systems thinking, we conclude that the challenges of the mortgage market are strongly interconnected and as such a single solution will not be appropriate. For example, while the American government has suggested that mortgage guarantees in Africa will stimulate a mortgage market, this measure does not tackle poor registration of land titles and persons. Our findings also suggest that attempts to develop African mortgage markets along the same lines as systems in the UK and the US where houses are built by real estate agencies will not achieve good results. Given that the traditional practice of buying a piece of land and then commissioning an artisan to build a house is still a very important route to home ownership, governments in Africa must find ways of enhancing the land title systems and encouraging banks to give loans to people who want to construct their own houses. Houses will then be cheaper and affordable to middle-income people.

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