FINANCIAL POLICIES AND PRACTICES THAT AFFECT HOUSING FINANCE ACCESSIBILITY AND AFFORDABILITY BY LOW INCOME URBAN HOUSEHOLDS

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Declaration

This Independent Study Paper is my original work and has not been presented for a degree in this or any other University.

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This Independent Study Paper has been submitted for examination with my approval as the University supervisor.

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Date 29/5/09 ---

Abstract

Housing finance still remains the foremost challenge in the provision and accessibility of adequate shelter to the bulk of low income urban households. Today we witness predominance of two extreme outcomes of current shelter systems, adequate shelter that is unaffordable or affordable shelter that is inadequate. Formulating and implementing policies and strategies that can make shelter both accessible and affordable for the low income urban households remains the principal challenge to most countries today.

This study reviews literature on accessibility and affordability of housing finance with a view of identifying the financial policies and practices that affect accessibility and affordability of housing finance by low income urban households. The study traces the evolution of housing finance policies. Theories which inform housing finance accessibility and affordability by low income urban household, as well as the current theoretical perspectives are also looked at. Finally, empirical literature review on fiscal and monetary policies that affect housing finance accessibility and affordability by low income urban households, practices by HFIs that inhibit housing finance accessibility as well as incentives that facilitate accessibility of affordable housing by low income urban households is undertaken. This is done with a view of determining whether they have enhanced accessibility of housing finance by low income urban households.

Firstly, the study affirms that accessibility and affordability of housing finance for low income urban households is a widespread problem in both developed and developing countries. In addition factors contributing to accessibility and affordability problems are complex and diverse with major driving factors found both within and beyond the housing system. Such factors include the global rise in property prices over the past decade and, in particular the appreciation of housing prices in the inner urban precincts of larger metropolitan areas. *Secondly,* the study establishes that direct access to housing finance from banks for the low income urban households, is extremely difficult due to lending practices, product design and selection criteria. HFI's require that borrowers have a stable source of income; they prefer dealing with large loans in small numbers to minimize administration costs as well as collateral with a clear title. Low income urban households on the other hand do not have stable incomes, they would be better served with many small loans and they lack clear titles. *Thirdly,* the role of microfinance in improving low income households accessibility and affordability of housing finance in emerging markets has not been fully explored. *Finally,* the impact of capital markets in mobilizing pension funds for financing low income housing has not been adequately investigated particularly in the developing countries.

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List of Abbreviations

ANHS	-	Australia National Housing Strategy
BC	-	Before Christ
BHBFC	-	Bangladesh House Building Finance Corporation
BVAR	-	Bayesian Vector Autoregressive
CPI	-	Consumer Price Index
CRR	-	Cash Reserve Requirement
DHS	-	Direct Housing Subsidies
ECVAR	-	Error Correction Vector Autoregressive
EU	-	European Union
FHOG	-	First Home Owner Grant
FHSAS	-	First Home Saver Account Scheme
GDP	-	Gross Domestic Product
GOK	-	Government of Kenya
HDB	-	Housing Development Bond
HFC	-	Housing Finance Company
HFIs	-	Housing Finance Institutions
HOSP	-	Home Ownership Savings Plan
ID	-	Identification Document
IDB	-	Inter-American Development Bank
IMSS	-	Mexican Institute of Social Security
LIHTC	-	Low Income Housing Tax Credit
IZ	-	Inclusionary Zoning
LTV	-	Loan-to-Value Ratio
MCI	-	Monetary Conditions Index
MENA	-	Middle East and North Africa
MHDC	-	Mission Housing Development Commission
MRI	-	Magnetic Resonance Imaging
MRR	-	Minimum Retail Rate
NCB	-	Nationalized Commercial Banks
NGO	-	Non Government Organization
NHC	-	National Housing Corporation
NRV	-	Net Rental Value
RSS	-	Retirement Saving System
SAP	-	Structural Adjustment Programs
SSA	-	Sub-Saharan Africa
SVAR	-	Structural Vector Autoregressive Regressions
UK	-	United Kingdom
UN	-	United Nations
UNCHS	-	United Nations Centre for Human Settlements
UN-HABITAT	-	United Nations Human Settlements Programme
US	-	United States of (America)
USAID	-	United States Agency for international Development
VAR	-	Vector Autoregressive
VAT	-	Value Added Tax
WB	-	World Bank

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Marx (1844, quoted in Khurana 2006 p.11) notes that *'man must be in a position to live in order to make history'*. This view expressed in the 1840s is still very relevant today. To live man needs to eat, drink, be clothed and have a dwelling place. Development of shelter is an ancient human activity and began with the purely functional need for a controlled environment to moderate the effects of climate. Human shelters were at first very simple and lasted only a few days or months. Over time these temporary structures have evolved into highly refined forms which are more durable. According to Khurana (2006) the hunter-gatherers of the late stone-age, who moved about a wide area in search of food, built the earliest temporary shelters. The agricultural revolution around 10000 BC, gave a major impetus to building permanent dwellings. By 3500 BC urban population or city population came to be distinguished where the permanent structures of dwellings grew and multiplied. Later as cities became the centre of trade, demand for housing and permanent shelter increased.

Debate and policies about housing accessibility and affordability and the need to provide more affordable housing are widespread throughout the international housing literature (Paris, 2007). International literature raises the issue of the ambiguity of the concepts of housing accessibility and affordability, and the way in which they are operationalised for specific policy purposes. In the early 1990s, this was raised as a central concern by researchers in both the UK and US, with suggestions that researchers and policy makers either clarify the meaning of the term or stop using it. Ambiguity in the conceptualisation of housing accessibility and affordability is also linked to different understandings of its causes and drivers, in particular, the degree to which the issue stems from inadequate incomes for working families or inadequate housing. In the US, Gabriel et al. (2005) notes that policy development has historically been informed by the assumption that lack of housing accessibility and affordability is primarily a problem of poverty.

Researchers such as Hancock (1993) and Freeman et al. (2000) have expressed concern about the utility of ratio measures in adequately capturing the phenomenon of housing accessibility and affordability, and the ongoing dependence on these measures within the policy arena. Feins and Lane (1981) and Wilcox (1999) have given considerable attention to affordability measures; Hulchanski (1995) has succeeded in clarifying the different uses of an affordability measure, although he, like Feins and Lane (1981), has remained within the confines of the ratio approach. Wilcox (1999) recognized the conceptual strength of the residual income approach, but in the end retreated into the conventional ratio measure as they considered the challenges in using the residual income approach for policy purposes. Stone (2006, p. 459) has recently argued strongly in favour of a residual income approach to affordability because 'housing costs tend to be inflexible and make the first claim on after-tax income for most households'.

Other researchers like Maclennan and Williams (1990) and Hulchanski and Shapcott (2004) have expressed concern that the development of affordable housing strategies is occurring in a period in which there is declining federal commitment to housing. There has been a shift towards the devolution of responsibility for the design and implementation of affordable housing initiatives to state and local housing agencies and community groups. This is the experience in the US and Canada, with the UK adopting a multi-level approach. The Australian experience follows a similar pattern, with state governments taking a leading role in policy development in the absence of federal policy direction and investment. In Canada, Shapcott (2004) concludes that the expansion of local affordable housing strategies has not compensated for the significant contraction in federal funding and programs.

In his study on the transition countries, Hegedus et al. (2004) notes that housing accessibility and affordability has become a new political issue. Before the transition it was a question of 'price setting' in the state sector, including prices of the housing services and housing units as well as the direct subsidies. The market then, had a limited role in the housing sector, but the situation changed dramatically in the 1990s. More and more services were liberalized or privatized and the market has become dominant with the decreasing role of the subsidies. During recent years, several independent studies have been undertaken (Chiu 2007; Beer et al. 2007; Whitehead 2007; Norris and Shiels 2007) explaining the extent to which planning can help to provide more accessible and affordable housing.

Tomlinson (2007) observes that housing finance debates in the developing world, and specifically in Africa, have two crucial issues: first, first, access to housing finance so as to access shelter, and second, access to housing finance to access a housing asset. The two are major areas of debate, whose focus varies depending on the target market. In providing access to shelter, the housing finance debate includes a consideration of the role of government in housing the poor while also exploring innovation in financial mechanisms and their effect on housing accessibility and affordability. An April 2005, survey by the World Bank in Middle East and Northern Africa (MENA) housing sector concluded that many of the regions country's suffered from affordability problems rather than insufficient housing stock. While segments of the population mainly lower income groups, suffer from inadequate supply, many of the countries are facing oversupply for the middle and upper income groups.

Studies relating to access to housing finance by low income earners lack in developing countries. In the Sub-Sahara Africa (SSA), the issue is currently receiving special attention as a result of the Financial Sector Charter: eight studies on Kenya, Botswana, Zambia, South Africa, Malawi, Mozambique, Namibia and Uganda which are exploring access to housing finance in various African Countries, all commissioned by FinMark Trust, have so far been carried out. The studies are meant as an input into a larger debate about how to enhance access to housing by low and moderate income earners throughout Africa. This paper focuses on, the financial policies and practices that affect housing finance accessibility and affordability by low income urban household in developing countries.

1.2 Conceptual Basis

1.2.1 Accessibility and Affordability

Accessibility in relation to housing relates to ensuring that individuals and families have sufficient resources to allow them to secure and enjoy housing that is appropriate to their needs. Robinson et al. (2006, p.2) defines accessibility as it relates to housing as: *'Accessibility is a reflection of initial conditions facing a potential tenant or owner. It includes the interest rate, house prices, rents, income and the criteria applied by lenders'*. The term accessibility has also been used to refer to homeownership affordability to distinguish the concerns of owner-occupiers from other groups (Yi Tong, 2004).

Affordability on the other hand relates to ensuring that individuals and families have the ability to enjoy housing services either through purchase, rent or allocation policy. A number of researchers have defined affordability in relation to housing. Maclennan and Williams (1990, p.9) defines affordability as follows: *'Affordability is concerned with securing some given standard of housing (or different standards) at a price or rent which does not impose, in the eye of some third party (usually government) an unreasonable burden on household incomes'*. Hulchanski (1995, p.471) on the other hand says: *'A household is said to have a housing affordability problem, in most formulations of the term, when it pays more than a certain percentage of income to obtain adequate and appropriate housing'*. Finally Robinson et al. (2006, p.3) says: *'Housing affordability refers to the capacity of households to meet housing costs while maintaining the ability to meet other basic costs of living'*.

The two concepts of accessibility and affordability are different. *Firstly,* in looking at affordability issues, the Australia National Housing Strategy (ANHS) distinguishes between accessibility, i.e. the cost of becoming a home purchaser or entering into a rental arrangement, and affordability, i.e. the ongoing cost of housing in relation to gross income (ANHS, 1991, p. ix). In other words housing accessibility is a reflection of initial conditions facing a potential tenant or owner. Such conditions include the interest rate, house prices, rents, income and the criteria applied by lenders. In contrast housing affordability typically refers to the continuing costs of owning or renting, it is a measure of the continuing costs of housing in relation to income. *Secondly,* accessibility to housing is mainly related to the deposit gap, which is the difference between the price of a typical house and the maximum amount of loan that can be repaid by a household on average weekly earnings or average household income. Affordability of housing on the other hand is related to a household's repayment capacity, which is based on income. Consequently, it impacts mostly on people with low incomes and at particular stages in their lives.

Thirdly, factors that can impact negatively on ability to access housing include supply shortages, poor budgeting and/or organization ability, and discrimination. In contrast factors impacting negatively on housing affordability include income, house prices and rents, interest rates, labour market conditions, level of mortgage and rent payments and supply constraints. *Finally,* measures of housing accessibility and affordability reflect both the household's savings capacity and repayment capacity. In broad terms housing affordability relates housing costs to household income. On the other hand measuring the ease of access to home purchase, would be to compare actual incomes against the income required to repay a home loan on an average house and land package with a given level of deposit. According to Jorgensen (2007), regardless of which approach is employed to measure accessibility, all rely on a combination of house prices, interest rates and incomes.

Both concepts have similarities. *Firstly,* both can be influenced by government housing policy for example, a grant to first-home buyers may make a purchase more 'accessible', while the payment of an accommodation supplement may make housing more 'affordable', other things being constant. *Finally,* both housing accessibility and affordability are determined by factors which include: the price of housing, the financial resources of prospective purchasers, conditions pertaining to the granting of mortgages e.g. the housing interest rate and the amount borrowed and the relationship between these factors. In his study Gabriel et al. (2005) observes that in the case of home ownership, an inability to save a deposit e.g. because of very low income is an access issue as well as an affordability one. Robinson et al. (2006) concludes that a person for whom housing is unaffordable is in effect lacking access, suggesting that there is no clear demarcation between the two concepts.

In their report titled, *Financing Urban Shelter: Global Report on Human Settlements,* UN-HABITAT (2005) have identified two extreme outcomes of current shelter systems that are being witnessed today, affordable shelter that is inadequate or adequate shelter that is unaffordable. This situation has arisen due to the limited and/or weak land and housing policy responses. The Habitat Agenda defines 'adequate shelter' as 'more than a roof over one's head'. 'It also means adequate privacy, adequate space, physical accessibility, and adequate security, security of tenure, structural stability and durability. In addition it means adequate lighting, heating and ventilation, adequate basic infrastructure, such as water supply, sanitation and waste management facilities, suitable environmental quality and health-related factors, and adequate and accessible location with regard to work and basic facilities, all of which should be available at an affordable cost'.

Carmichael and Slater (1999) notes that, accessibility and affordability emerged as the key housing issues in countries such as the US and the UK during the late 1980s following the move towards more market oriented housing sectors. In recent years Hulchanski (1995) concludes that 'housing accessibility and affordability' has become a common way of summarizing the nature of the housing difficulty in many nations. This is in contrast to the 'slum problem', the 'low-rent housing problem', the 'housing shortage' or the 'housing need' definitions of previous decades. Housing accessibility and affordability is the most commonly cited housing problem around the world. The term is used in many contexts and carries a host of possible definitions. In this paper, the focus is exclusively on the ability of households to purchase a home. We define housing finance accessibility and affordability as the ability to purchase a dwelling of the appropriate size and minimum physical and sanitary standards and still have sufficient income to enjoy at least the minimum consumption of other essential goods and services.

1.2.2 Housing Finance Policies and Practices

Agrawal et al. (2009, p.1) defines policy as 'a set of considerations designed to guide decisions on courses of actions'. The term may apply to government, private sector organizations and groups, and individuals. Policy may also refer to the process of making important organizational decisions, including the identification of different alternatives such as programs or spending priorities, and choosing among them on the basis of the impact they will have. Practices on the other hand are knowledge of how something is usually done. Financial housing policy is used to describe the legal and financial means of intervention used by governments. The fundamental aims of any policy is to increase efficiency, i.e. minimize resource costs and allocate resources to their highest valued uses, and to meet distributional objectives by increasing opportunity and a fairer distribution of income.

In the context of housing finance, efficiency can be seen as ensuring adequate investment, improving affordability, reducing production costs, ensuring a stable housing system which limits risk, and supporting choice. Distributional objectives can similarly be taken to include enabling adequate access to housing, ensuring minimum housing standards; and at the least making certain that policy does not undermine wider equity objectives (Gibb and Whitehead, 2006). The government uses two types of policies to evaluate economic activity and set interest rates in balance with inflation and deficiencies. Fiscal policy is used in evaluation of economic activity, to assess the level of taxation requirement, and establishing what fraction of taxation will be spent on public expenditure. Monetary policy on the other hand is used for assessing the supply of money and interest rates to achieve desired economic policy objectives.

The fiscal policy of a government can counter the monetary policy. Government borrowing competes for the same loanable funds as other investment, so an increased deficit may result in a rise in interest rates. Government debt also represents a form of money in the broad definition, increasing the money supply. From a monetary policy point of view, housing finance aspects deserve close monitoring as bank loans to households for house purchase are a counterpart to the monetary aggregate. There are four channels through which monetary policy impulses affect the conditions of housing finance. The interest rate channel, the credit channel, the wealth channel and finally the exchange rate channel (Drexler, 2008). In most countries of the emerging markets, the financial regulatory bodies, the Central Bank, have used policies like Cash Reserve Requirement (CRR) and Liquidity Ratio as instruments of monetary policy and variation of tax rate as instruments of fiscal policy. CRR is the percentage of the banks total deposit liabilities to be kept in an account with the monetary authorities.

1.3 Problem Statement

Despite implementation of a broad range of fiscal and monetary policies in the past three decades by most developing countries, the problem of accessibility and affordability particularly by low income urban households still persists. The traditional lending practices by Housing Finance Institutions (HFIs) that have tended to inhibit low income urban households in accessing affordable loans, have remained largely unchanged over time. Invariably this has lend to a housing phenomena characterized by adequate shelter that is unaffordable or affordable shelter that is inadequate. In this context adequate shelter refers to housing that is located in a suitable environment with basic services and security of tenure. This paper reviews and analyzes the financial policies and practices that developing countries and HFIs in the said countries have implemented in the last three decades to assess the effects they have had on housing accessibility and affordability by low income urban households. In addressing the study the following related questions will be inquired into:

1. What effects have fiscal and monetary policies that most developing countries pursued, had on housing finance accessibility and affordability by low income urban households?

2. What are the savings mobilizations and lending practices that inhibit accessibility to housing finance by low income urban households that are practiced by HFIs?

3. What kinds of Incentives are required to facilitate accessibility and affordability of housing finance by low income urban households?

1.4 Significance of Study

The study will serve an important role by contributing to the literature on the challenges faced by low income urban households in accessing and affording house finance. This is a subject that is of great importance to lenders, consumers of mortgage funds, investors, researchers and policy makers.

1.5 Organization of the Paper

The paper is organized in four chapters. The first chapter covers the background to the study and discusses the conceptual basis. The problem statement as well as the significance of the study is also expounded in the same chapter. Chapter two discusses theories and general literature that inform existing knowledge on housing finance accessibility and affordability by low income urban households. Chapter three reviews studies on effects of fiscal and monetary policy on housing finance and studies on savings mobilizations and lending practices by HFIs that inhibit housing finance accessibility and affordability by low income urban households. Studies on incentives that have been implemented that facilitate housing finance accessibility and affordability by low income urban households are also reviewed in this chapter. Chapter four discusses the key findings that emerge from the study. The chapter also discusses the research and knowledge gaps and gives the related recommendations.

CHAPTER TWO

2.0 GENERAL AND THEORETICAL LITERATURE REVIEW

2.1 Introduction

This section focus on the general and theoretical literature which; informs housing finance accessibility and affordability by low income urban households. The section first looks at the evolution of housing finance policies; the theories that underpin the study are then reviewed. Literature on current theoretical perspectives on financial policies and practices that affect housing accessibility and affordability is finally reviewed.

2.2 Evolution of Housing Finance Policies

The last few decades have seen tremendous shifts in housing finance policies in developing countries. The evolution of the housing finance policies can be looked at under four distinct stages. The *first* stage is the traditional policy where the governments were responsible for housing provision for their populace; the *second* was the stage whereby the governments would subsidize housing by slums upgrading and through sites and services projects. This gave way to the *third* stage; the enabling approach policies of the 1980s whereby it was advocated that the government's role be that of a facilitator instead of participating in the provision of housing; the advocates recommended that housing be provided by the market. The *final* stage reflects the current situation today where the governments are re-thinking the market provision of housing particularly to the low income groups.

Looking at the *first* stage, it was assumed that governments had to play the key role in the provision of housing, and access to better housing particularly for the poor, was its responsibility. The traditional policy was for the governments to build public housing; the governments would set aside some money from its budget which would be used in the construction of the houses. The government would also encourage employers to provide housing for their workers. Public housing projects, however, faced strong criticism with many critics arguing that the houses built by governments did not match the needs of the intended beneficiaries. Moreover, conventional public housing is an expensive strategy, and for most governments it was difficult to continue because of their fiscal limitations (Arnott, 2008). Okonkwo (1998) notes that in Kenya past policies also tended to put too much emphasis on the government doing everything for its poor citizens, from planning and land allocation to developing and maintaining housing estates. The latter gave rise to the National Housing Corporation (NHC) charged with responsibility for providing subsidized housing. Funds for such housing projects came from the World Bank, the U.S. government through United States Agency for International Aid (USAID) and other international development agencies.

The *second* stage started in the 1970s, whereby public housing schemes were replaced by slum upgrading and sites and services projects. These projects were less expensive, more flexible, and allowed additional control and participation by potential beneficiaries; the government would intervene in forms of subsidies. Arnott (2008) notes that Sites-and-services and slum upgrading projects, initiated in Senegal in 1972, signaled the first fundamental shift in housing finance policy in the postwar years -- from total public housing provision to public assistance in private housing construction. The shift was based on the realization that in most developing countries legal housing produced by the private sector was not affordable for most urban residents. At the same time the mass production of enough high-standard housing to meet urban needs required massive subsidies that most governments in market-oriented economies were either unwilling or unable to afford.

The *third* stage started in the 1980s when the very idea of government involvement in housing was under considerable attack. The critics succeeded in seriously eroding state participation and efforts to influence the housing markets and advocated for the enabling policies. Enabling policies were first elaborated and promoted internationally in 1988 when the United Nation (UN) General Assembly unanimously endorsed the Global Shelter Strategy for the Year 2000, a document prepared by the UN Center for Human Settlements. Shortly after the UN endorsement of enabling policies, the World Bank articulated its own views on enabling policies and incorporated them into its Housing Policy Paper, Enabling Markets to Work (1993). Similarly, the Inter-American Development Bank (IDB) endorsed enabling strategies within its Operational Guidelines for Housing, and provided an overall framework for the Bank approach to housing policies and, in particular, to housing subsidies (www.citiesalliance.org).

Arnott (2008) notes that there has been significant improvement in the policy environment in most developing countries since the 1993; housing financial markets have been significantly liberalized. At the same time, the withdrawal of governments and the World Bank from housing assistance to low-income households has been excessive. Regarding evolution of housing finance policy in developed countries, Malpezzi and Green (2003) provide expert reviews of the current state of housing finance policy in the United States, as well as some of its history. The federal government plays a dominant role in low-income housing financial policy, though in recent years local governments have been playing a larger role. On the same issue Olsen (2003) notes that there are three types of federal rental housing assistance programs. The first is public housing, second are projects that are owned privately, and the third is tenant-based assistance in private housing - housing allowance and housing voucher programs.

All the programs have exhibited considerable, indeed rather bewildering, variation over time, in terms of the form and magnitude of the subsidies provided to building owners, as well as tenant eligibility criteria and tenant rent formulae. He continues to note that over the past four decades, there has been a steady movement away from public housing and towards housing allowances calculated according to tenant household income, so that now only about thirty percent of federally subsidized housing units are in public housing. Most owner-occupied housing assistance comes via the income tax system, in particular the deductibility of homeowner mortgage interest payments for households that choose itemized deductions. Since most poor households pay less income tax by not itemizing, the income tax provides little encouragement to poor households for homeownership.

No overall review of housing finance policy in Europe, comparable to the United States has been done. Malpezzi and Green (2003) however notes that several differences from the US experience during the post World War II era are, evident as well as similarity to it. *First*, especially in Northern Europe in the forty years after World War II, government involvement in the housing sector was far more extensive than in the United States, to the extent that in some countries most housing units were built and allocated by the state. *Second*, in response to both the inefficiencies created by over-regulation and the heavy fiscal burden of government-provided housing, over the last twenty years all European countries have been gradually withdrawing from the housing sector. They have done this by deregulating and moving towards greater reliance on markets in the provision of housing, with rental housing assistance being increasingly geared to income. *Third*, there has been the same trend as in the United States towards demand-side, tenant-based housing allowances, and away from supply-side, construction-based subsidies. And *fourth*, while European countries have moved to greater reliance on the market in the provision of housing, the sentiment lingers that it is the responsibility of government in a civil society to ensure decent and affordable housing for all its citizens.

In the recent past, there has been tremendous shift in housing finance policies the world over, which represents the *final* stage of housing finance policies evolution. Noting that housing finance is crucial to improving access to housing, particularly for the poor, governments have now started focusing on financial policies that aim at widening access to housing finance or to housing directly. 'First-tier' housing policy objectives have been defined as facilitating households' access to housing of an acceptable quality at a price that they can reasonably afford. The role of a housing finance system is to bridge the gap between households' incomes and house prices. Stephens (2005) notes that there are two essential constraints facing households: an 'access constraint' and 'an affordability constraint'. The first constraint is determined by factors that are largely endogenous to the housing finance system; the second by factors that are both endogenous and exogenous to it. Financial Policies that aim to overcome the access constraint include: subsidized housing, contract-savings schemes to help households acquire a sufficient down payment, deposit-based house purchase certificates, state guarantees on high Loan-to-Value Ratio (LTV) loans. On the other hand financial policies that aim to overcome the affordability constraint include: interest rate subsidies and tax relief on mortgage interest payments.

Many of these financial policy instruments have been criticized for a variety of reasons, some contract savings schemes have been quite inefficient because they have been open to use as subsidized generic savings schemes and not used for housing. Shinozaki (2004), for example, reports that 40 percent of savings in the Polish housing- savings scheme were not used for housing. Diamond (2005) has also noted that interest rate subsidies carry some of the same problems as contract savings schemes. The basic point is often made that interest subsidies may be a substitute for poor economic management, i.e. are necessitated due to high inflation and high interest rates. Dealing with the same issue Magnetic Resonance Imaging (MRI) information, and cited by Dübel (2004) points out that tax relief on mortgage interest can give rise to severe distortions. Tax credits might be expected to be less regressive than simple tax relief, but the evidence from Hungary suggests that this instrument is also very regressive. The usual critiques of the subsidy suggest that it is wasteful in that it becomes at least partly capitalized into higher prices and tends to be regressive.

2.3 Housing Finance Theories

The following five theories are some of the key theories that underpin the theoretical framework pertaining to financial policies and practices that affect housing finance accessibility and affordability by low income urban households. They include: Loanable Funds theory, Keynesian theory, Financial Liberalization theory, Free Market Enterprise theory as well as Housing Subsidy theory.

2.3.1 Loanable Funds Theory

The *first* theory is the Loanable Funds theory which seeks to explain the market determination of interest rates. It was developed by Knut Wicksell, a Swedish Economist, in 1898 (Wicksell, 1965). The level of interest rate can facilitate or inhibit accessibility of housing finance. The rate will depend on the supply and demand of loanable funds. Expounding on the theory, Philbeam (2005) and Nwaoba (2006), note that the loanable funds approach views the interest rate as being determined by the supply and demand for loanable funds in the financial market. The increase in the supply of loanable funds necessitates downward trend in the cost of funds and interest rate, all other things being equal. An increase in the demand for loanable funds exerts pressure on the available funds resulting in a rise in the cost of funds and interest rate. The theory also explains that investments and savings determine the long-term level of interest rate whereas the financial and monetary conditions in the economy determines the short-term interest rate, while the equilibrium interest rate is such that it clears both the money market and the loanable funds market. This position was supported by Turner (2007 and 2002) where it was argued that the rise in inflation rate, with action not being taken about interest rate resulted in the virtual elimination of long-term, fixed rate local currency debt in several countries of the emerging world, which needed long-term investment for infrastructural development.

The loanable funds theory also has implication on accessibility and affordability of housing finance since according to Druschel (2006), mobilization of savings and investments is central to housing development. It is essential that housing finance systems compete for resources in the financial and capital markets, through instruments that offer attractive rates, maintain borrowers' access and provide safety to savers. This implies the existence of mechanisms that protect savings from inflation, the existence of appropriate instruments for mobilization of long-term resources and the readiness of sources of funds that can be invested at long terms in order to achieve proper asset-liability management balance. Given the necessity to raise long-term funds and the potential that these sources of funds offer; in the future savings mobilization toward the housing sector will come from general savings in the economy. This saving can be through family deposits in multiple banks, pension funds or savings of the rest of the world, by means of an innovation in the instruments of intermediation of the financial sector, such as mortgage securitization.

2.3.2 Keynesian Theory

The *second* theory that can be used to rationalize housing finance accessibility and affordability by low income urban households is the Keynesian theory. The theory was developed by the twentieth-century British economist John Maynard Keynes in his book titled, 'The General Theory of Employment, Interest and Money', which was published in 1936 (Keynes,1936). Keynesian theory and policy were developed to address the problem of unemployment arising from the Great Depression. Prior to the Great Depression, public policy was shaped by the views of classical economists who generally believed that free markets were the best way to achieve national economic prosperity. Economists believed that natural market forces, such as changes in prices, wages, and interest rates, would correct the problems of inflation and unemployment; there was no need for government intervention in the economy. Keynes's main quarrel with the classical economists was that prices and wages did not appear flexible enough to ensure the full employment of resources, e.g. they were sticky and natural forces would not return the economy to full employment in a timely fashion. Keynes also believed business expectations might at times become so bleak that even very low interest rates would not spur firms to invest all that consumers might save.

The state, according to Keynesian economics, can stimulate economic growth and improve stability in the private sector - through, for example, interest rates, taxation and public projects. The Keynesian theory has implication on accessibility and affordability of housing finance by low income urban households in that governments often use their fiscal policy to try to influence the economy towards economic objectives such as low inflation and unemployment. According to Keynesian economics, high government spending, funded by a deficit, can be beneficial to the economy by stimulating aggregate demand and decreasing unemployment, during a recession. Hammond (2006) and Roy (2007) however notes that, application of wrong macroeconomic policies to solve economic problems being encountered by millions or even billions of individuals/families in a sovereign country could have a devastating effect on that economy, whether developed or emerging.

2.3.3 Financial Liberalization Theory

Financial Liberalization theory is the *third* theory that has implication on accessibility and affordability of housing finance by low income urban households. The theoretical sources of financial liberalization are the theory of financial repression initiated by Ronald McKinnon and the theory of financial deepening put forward by Edward Shaw in 1970's. McKinnon (1973) and Shaw (1973) held these policies responsible for the low growth rates of many developing countries during the 1950s and 1960s. They both argued in favour of liberalizing financial markets on the grounds that this would both lead to more and more efficient investment which in turn, would lead to higher economic growth rates. The attempt to strengthen the private sector by many developing countries led to the implementation of financial liberalization policy as part of the Structural Adjustment Programme (SAP). The SAP recommended the removal of subsidies, interest rate decontrols and also directed credit. Financial liberalization refers to measures directed at diluting or dismantling regulatory control over the institutional structures, instruments and activities of agents in different segments of the financial sector.

Both Renaud (1997) and Bandiera et al. (2000) note that, the government control and regulatory interventions restricted the behavior of lending institutions in the manner of lending, the types of lending, and in the volume and cost of funds. These characteristics were major drawbacks in the development of the housing finance markets of developing countries (Gyntelberg et al. 2007). Girouard et al. (2007) have noted that deregulation and financial liberalization have made various changes in housing finance markets attainable in several countries over the past two decades. In the mortgage markets, financial liberalization is presumed to lead to competitive interest rates based on the supply and demand for funds. Privatization and admission of new entrants should lead to a competitive and more efficient lending environment.

The financial liberalization had both positive and negative effects on housing finance accessibility and affordability. In Kenya, financial sector liberalizations eliminated ceilings on interest rates charged on mortgages by HFIs, and introduced privatization of these institutions, which were previously under government ownership. Gachuru (2005) notes that although liberalization was made a precondition for receiving foreign aid by the donor community, the determination of interest rates by market forces, along with competition and perceived consequent efficiency from privatization were key objectives of the policies. Overtime, the private sector has started providing housing finance. For example, in Kenya, several banks from the private sector such as Barclays bank, CFC Stanbic bank, and Standard Chartered, now provide housing finance which enhances access to affordable housing.

The theoretical effect of financial liberalization on the interest rate is ambiguous. Okpala (1994) argues that financial changes that reduce constraints on funding availability, or on credit qualification push up demand for funds, and therefore lead to an increase in interest rates. But on the other hand, increased competition for funds is reported to have boosted the supply of loanable mortgage funds, leading to a decrease in interest rates. Before the advent of liberalization and other economic reforms in developing countries, Okpala (1994) observes that HFIs like most other industries were owned by government. The main objective was to make homeownership more affordable, and to increase long-term debt. Government regulatory policies facilitated access to relatively low cost funds, as well as monopolistic use of subsidized funds. This in itself made them uncompetitive in the market place in which they remained segmented. But in return, Renaud (1997) reports that the state banks or HFIs were often restricted in asset powers and obligated to devote a large share of their mortgage assets to loans that were below market interest rates.

2.3.4 Free Market Economy Theory

The *fourth* theory that can be used to rationalize accessibility and affordability of housing finance by low income urban households is the Free Market Enterprise theory which was developed by Milton Friedman (Friedman, 1962). The theory advocates for minimal government regulation concerning the pricing of goods, requiring instead that prices are set by the forces of supply and demand. The theory also recognizes that private investment in the housing sector will only be viable if market conditions apply in the construction and financing of dwellings. The theory has implication on housing accessibility and affordability since market mechanisms will not give access to housing to those sectors of the population which do not have sufficient purchasing and payment capacity. The State must therefore assume a subsidiary role designed to ensure equality of opportunities so that all families, whatever their economic position, will have the possibility of solving their housing problems through the market and obtaining a housing solution in keeping with their own efforts and economic possibilities.

Commenting on the theory, Arrieta and Gerardo (1998), notes that the free enterprise movement stands for private enterprise, the principle that businesses should be owned and controlled by private persons and not by government. The prevalence of conditions of profitability and competitiveness in the real estate and housing finance markets have implication on accessibility and affordability of housing finance. *Firstly,* the mortgage loans have to be recovered in real terms, thus making long-term housing finance a sustainable venture. In pursuing this mandate, HFIs are often seen as unrealistic, inflexible and insensitive capitalist organizations which do not understand the special circumstances of the low- income urban groups, most of which cannot meet their stringent eligibility criteria and rigid lending terms. *Secondly,* the HFIs have to find a profitable business option in housing finance too. In so doing there is a mismatch between the demand requirements of the poor households' and the supply requirements of the formal finance sector such as; loan size, loan repayment period, availability of follow up, funds regularity of principal repayments, language used for writing loan conditions and an acceptable form of collateral. As a result of these factors the formal finance institutions regard the low income group as un-bankable because of perceived high risks.

2.3.5 Housing Subsidy Theory

The final key theory that informs financial policies and practices that affect housing finance accessibility and affordability by low income urban household is Housing Subsidy theory. The theory can not be pinned down to any specific researcher but was given prominence during the Habitat II conference in Istanbul, Turkey in June 1996. Paragraph 97 of the Habitat Agenda (1996) emphasizes the need to: '*provide, where appropriate, targeted and transparent subsidies... and various types of safety nets to the most vulnerable groups*'. Governments endeavor to reduce the cost of financing housing to certain categories of households in order to facilitate accessibility to affordable shelter. To help ensure affordability, where resource costs put adequate housing out of the reach of individuals, rents and prices have to be reduced by subsidy or cross-subsidy from other actors such as landowners or other tenants. Approaches to housing subsidy policies and their implementation have changed greatly over the years, in response to observed successes and failures in different subsidy schemes and to broader conceptions of the role of subsidies within the arsenal of housing policy instruments.

The most significant change in subsidy policy and design is associated with a general shift in focus toward enabling policies which aim to create a well-functioning housing sector while ensuring that the needs of the poor are met. Diamond (2005) notes that housing subsidies; have been in the center of policy discussion. One extreme view states that housing subsidies should be restricted only to the neediest groups and should be applied as a part of the safety net, because every intervention into the housing finance system causes distortions with high public costs. The other extreme is that housing subsidies are a necessary part of the housing finance system and their role is unavoidable in development of the housing finance system. Moreover, the scope of the subsidies should include well-off households in order to maximize the multiplier effects of housing investment on the whole economy.

Housing subsidy theory has implication on housing finance accessibility and affordability by low income urban households in that poorly designed subsidy programs can stifle demand and inhibit potential private sources of housing finance. Diamond (2005) concluded that, based on the many subsidy schemes that they examined, most subsidy schemes are not part of a well-thought-out policy structure and tend to be highly political and ad hoc. The review of the major types of housing finance subsidies makes it clear that efficient, effective, and transparent subsidy schemes are quite rare. In many cases, the subsidy policy is driven by short-term political processes rather than an explicit policy formulation process.

2.4 Current Theoretical Perspectives

The current theoretical perspectives can be classified into five groups. *Firstly,* governments have been making deliberate policies and incentives to address accessibility and affordability of housing finance by low income groups. *Secondly,* there has been focus on savings mobilization using pension funds for housing with successful outcomes in many countries. *Thirdly,* the use of 'Bausparkassen System' for contractual saving for housing has been used successfully in developed countries. Bausparkassen are credit institutions, whose business objective is to accept bauspar deposits from its customers and to grant loans from these aggregate savings to bauspar customers for housing finance activities. *Fourthly,* there has been thinking on use of planning including Inclusionary Zoning (IZ) as a way of dealing with accessibility and affordability of housing by low income groups. IZ requires developers to make a percentage of housing units in new residential developments available to low and moderate income households. In return, developers receive non-monetary compensation in the form of density bonuses, zoning variances, and/or expedited permits that reduce construction costs. *Finally,* there has been a change of the passive role by the governments to that of active and effective engagement through partnership, facilitation and catalyzing development through incentives, infrastructure provision and monitoring implementation as a way of addressing the housing accessibility and affordability challenges.

Addressing each of the above separately we note that *firstly*, in order to revitalize the housing sector, the current thinking is that there is need for deliberate policies and incentives particularly to attract investments in low-income housing to meet the current and future demand. In some countries such as India, Sri Lanka, Mexico and Singapore the most common and effective interventions and measures include: provision of infrastructure, legislation, regulations, fiscal and monetary measures, and administrative practices (See Annex 2). India used its 1994 National Housing Policy as transition of the Government's position on housing policy. The policy stressed the importance of housing as an integral part of the national strategy for poverty reduction and employment. It also focused on increased participation by the formal private sector and emphasized that the government's role is to create conditions for the expansion of housing supply through the removal of legal and regulatory constraints and to support appropriate infrastructure investments. With a focused approach, Sri Lanka managed to rebuild 98,000 houses damaged or destroyed by the Tsunami within 2 years (GOK, 2007a). This was after focusing on a new housing policy and after for a long time, utilizing Cooperatives to establish community-based low-income housing projects. Adebayo and Adebayo (2000) notes that South Africa has also implemented a social housing policy by redirecting fiscal spending and improving the efficiency of the tax collection system, preceded by a White Paper on Housing Policy and Strategy for South Africa in 1994.

Secondly, some countries such as Singapore, Mexico, Mauritius, South Africa as well as the USA have successfully used pension funds for financing housing development (GOK, 2007a). In the case of Singapore, the Housing and Development Board (HDB) is a statutory board and was created in 1960 and uses the country's Pension funds on low-cost government-built houses. Residents in the low and middle income groups are allowed to use their Central Provident Fund, as down payment for their flats to the extent that it provides 98% of all the housing for this group. HDB is now credited with clearing up the squatters and slums and resettling residents in these houses to the extent that 80-90% of Singapore residents live in HDB flats. Under the Mexican pay-as-you go pension system, employers, employees and government together contribute 15% of a workers salary for retirement and housing benefit. About 8% goes to the Mexican Institute of Social Security (IMSS) which is a government agency responsible for providing retirement and other benefits; 2% is directed to the Retirement Saving System (SAR) and 5% to a National Housing Fund called INFONAVIT. Contributions to INFONAVIT which was established in 1972 are used to provide housing loans to workers. The success of the institutional framework has led to an increase in house production in 2003-2005 of 45% and the goal was to produce 750,000 housing units in 2006.

Chirchir (2006) notes that Mauritius and South Africa allow pension schemes to issue loans directly to members as well as allowing scheme members to use an equivalent of 2/3 of their future benefits as security for obtaining loans from banks and housing finance institutions. Accumulated benefits are left intact. Borrowers only pay interest through the lifetime of the loan and access benefits to pay the principal amount at normal retirement. In South Africa, pension administrators raise housing finance through the capital markets by issuing pension-backed securities to enable members to acquire home ownership. A number of pension funds in the United States of America, have created vehicles for the investment of public pension funds in a variety of national housing programmes for the benefit of pension fund participants.

Through this arrangement the scheme participants acquire mortgages at favourable terms – both down payments and interest rates terms. As early as the 1980s, public pension funds in various states of United States of America have been committing substantial portions of pension funds for construction of houses for low-income groups. The pension plans issue funds to developers who agree to construct houses at subsidised rates or enable low-income earners to secure mortgages at subsidised rates. The secured mortgages are used to purchase subsidised housing. Public Pension plans have also engaged in renovating old abandoned houses that are in turn sold to members at subsidised rates.

Thirdly developed countries like Germany, Austria, and East European Countries, have addressed the accessibility and affordability of housing problems by low income groups by using the 'Bausparkassen System' for contractual saving for housing. *Fourthly*, developed countries debates about the extent to which planning can help provide more accessible and affordable housing or reduce growing problems of affordability, have taken some prominence during recent years as housing provision is increasingly dominated by markets (Chiu 2007, Beer et al. 2007, Whitehead 2007, Norris and Shiels 2007). In the United States, where IZ is used widely, Gurran et al. (2008) observes that mandatory inclusionary requirements are made more feasible by the existence of Federal and State tax incentives designed to stimulate development of housing for low income households such as the Low Income Housing Tax Credit program. By combining planning requirements for affordable housing with funding, subsidies or incentives, strong not for profit housing developers have emerged in the United States, the United Kingdom and the Netherlands, to provide a viable 'delivery infrastructure' for affordable housing that can be created or secured through the planning and development process.

Finally in both the developed and developing countries the current thinking is that governments must be involved actively in improving accessibility and affordability of housing. In Australia, Rudd et al. (2007) notes that although there is no one answer to improving accessibility and affordability of housing finance, housing experts and economists see urgent need for all three levels of government to work together with the community and private sectors to improve the current situation. This means keeping downward pressure on interest rates; helping people into home ownership; implementing policies that induce growth in new construction; encouraging investment in affordable rental properties not just high end rental properties; and monitoring the rate of new household formation. It also means adequately funding safe and secure housing for the most vulnerable Australians.

In the developing countries the thinking is that there should be a shift from the mid-1980s, 1990s and early 2002s donor induced passive role by the governments to that of active and effective engagement through partnership, facilitation and catalyzing development through implementation of incentives, infrastructure provision and monitoring. This is as a result of realization that the government and the public sector at large will not be able to generate the large quantum of resources required to finance the envisaged housing investment. In Kenya, the Ministry of Housing for example, constituted a committee which came up with a report that proposed 30 different incentives and market re-engineering measures for consideration by the government (see Annex 3). Only a few of the incentives proposed in the said report were adopted by the Minister of Finance in his budget for fiscal year 2007/2008 (GOK, 2007b).

The incentives that the Government of Kenya has so far adopted include: (i) Tax remission for developers of projects of not less than 20 housing units intended for low income earners. A low income earner is a person earning a monthly gross of Kshs 35,000/- and low cost housing is defined as a house whose construction cost is not more than Kshs 1.6 million and whose plinth area is not less than 30 sq. m.; (ii) Amendment of the Retirement Benefits Authority Act No. 3 of 1997 to provide for members to use their pension scheme savings as guarantee or collateral for housing loans; (iii) Industrial building deductions on capital expenditure incurred on the construction of dwelling houses constructed for and occupied by employees of a business carried out by the persons owning the dwelling house; (iv) Zero rating (Value Added Tax) VAT on building materials used to construct housing for low-income groups; and (v) Exemption from income tax of interest income accruing from all listed bonds used to raise funds for infrastructure and social services provided that the bonds have a maturity of at least three years (GOK, 2008).

These recently adopted incentives supplement previous past incentives for the housing sector which includes: (i) Tax deductibility for housing loans; the interest paid by a person on money borrowed to purchase or improve a house occupied by him is a tax-deductible expenditure against his taxable income up to a maximum of Ksh. 150,000/- per annum; (ii) Contributions to Home Ownership Savings Plan (HOSP); a depositor who operates a registered home ownership savings plan is entitled to deduct from his taxable income an equivalent of Ksh. 4,000/- per month i.e. maximum of Ksh. 48,000/- per annum for a maximum period of ten years. The interest income earned by a depositor of HOSP on any deposits up-to a maximum of Ksh. 3 million is tax exempted; (iii) Lower taxation of Housing bonds; the interest income arising from housing bonds is taxed at a final rate of tax of 10%.; (iv) Tax deductibility for expenditures for social infrastructure; Expenditure of a capital nature incurred by a person on the construction of a public school, hospital or any similar kind of social infrastructure and is given prior approval by the Minister for Finance is tax deductible, this goes a long way in enhancing access to housing by low income households as costs of on-site infrastructure accounts to about 25% of total housing costs (GOK, 2008).

2.5 Summary

The following findings emerge from the review of the general and theoretical literature. *Firstly,* the study notes that in the recent past, there has been tremendous shift in housing finance policies the world over. Since housing finance is crucial to improving access to housing particularly for the poor, governments have now started focusing on financial policies that aim at widening access to housing finance or to housing directly. Many of the financial policy instruments used however have been criticized for a variety of reasons. And although they posses' great potential for improving housing finance delivery, there is need to rethink and repackage some policies so that majority can benefit from them. *Secondly* for the low income urban households, direct access to housing finance from banks is extremely difficult due to lending practices, product design and selection criteria. Essentially the structuring of banking products and services reflects a belief that there is little or no profit to be made from serving low-income urban households.

Finally, mobilization of savings and investments is central to housing development. It is therefore essential that housing finance systems compete for resources in the financial and capital markets, through instruments that offer attractive rates, maintain borrowers' access and provide safety to savers. Given the necessity to raise long-term funds; in the future savings mobilization toward the housing sector will come from general savings in the economy. This saving can be through family deposits in multiple banks, pension funds or savings of the rest of the world. In South Africa, pension administrators raise housing finance through the capital markets by issuing pension-backed securities to enable members to acquire home ownership.

CHAPTER THREE

3.0 EMPIRICAL LITERATURE REVIEW

3.1 Introduction

This chapter examines studies on the financial policies and practices that impact on housing finance accessibility and affordability by low income urban households. The chapter begins with a review of studies on effects of fiscal and monetary policies on accessibility of housing finance, and then reviews the studies on HFIs savings mobilization and lending practices that inhibit housing finance accessibility by low income households. Finally a review of studies on incentives that facilitate accessibility of housing finance by low income urban households is carried out.

3.2 Studies on Effects of Fiscal and Monetary Policies

This section reviews studies on effects of fiscal and monetary policies on accessibility and affordability of housing by low income urban household. Studies on effects of fiscal policy are reviewed first, followed by a review of studies on the effects of monetary policy.

3.2.1 Studies on Effects of Fiscal Policies on Housing Finance

Wong and Phang (1997) examines interest rates, income growth rates and the supply of housing effects in the determination of private housing prices in Singapore between 1974 and 1995. The objective of the study was to develop an understanding of how various policies have affected private residential property prices during the past two decades. The study uses multiple regression models with random error terms that follow a first order autoregressive process. Regression models are used to predict one variable from one or more other variables. The study's findings were that private housing prices in Singapore were highly correlated with the prices for public-sector-built housing.

Moreover, the timing of government policies relating to the use of compulsory savings for private housing finance purposes, the liberalization of rules on public housing ownership criterion as well as for housing finance had a significant impact on private housing prices. The above findings suggest that the co-ordination and timing of housing-related policies are crucial to prevent excessive instability in private housing prices. This is relevant to accessibility and affordability of housing finance by low income urban households since low income households will not access houses whose prices are high relative to their incomes. These findings have important implications for residential property price management and therefore macroeconomic management with far reaching effects on the accessibility and affordability of housing finance by low income urban households.

Another study, exploring the relationship between a change in the personal income tax treatment of home ownership and change in house prices in several European countries was carried out by Vries et al. (2004). The aim of the study was to compare the effects of personal income tax reform on the development of house prices. The study used econometric modeling and the results shows that the method and timing of adjustments in the tax system have a strong influence on the house price development. Furthermore, econometric modeling of the Dutch home owner market suggests that when the restrictions on tax concessions are less stringent, the real decline in house prices is not as steep and does not last as long.

Econometric modeling are forecasting technique that uses computer processed mathematical equations that are based on historical data and certain assumptions to predict economic conditions. These models are employed commonly in determining the economic aspects of changes in government policies, regulatory conditions, interest rates, demographic changes, tax laws and wage levels. The findings suggest that government fiscal policies affecting housing have to be carefully crafted and implemented as they may have a strong influence on house price development. This has implication on accessibility and affordability of housing by low income urban households since house prices will affect their ability to get adequate housing.

Wolswijk (2005) analyzes the effects of fiscal instruments on mortgage debt growth in the EU over the period 1982-2003. The aim of the study was to determine what effects fiscal instruments have had on mortgage debt growth in the EU. The study first described the main fiscal instruments that governments used to affect mortgage-financed home-ownership. In the empirical part, real mortgage debt growth was analysed for 15 EU countries using pooled regressions over the period 1982-2003. Fiscal effects are included via after-tax interest rates. Pooled regressions are usually carried out on time-series cross-sectional data- data that has observations over time for several different units or 'cross-sections'. The findings of the study was that other factors shown to be relevant for mortgage debt growth are house prices, financial deregulation and stock markets, while the effects of household income and inflation are less evident, after-tax interest rates exerted a negative effect.

The latter variable includes housing subsidy elements via the deductibility of mortgage interest payments that is allowed in most EU countries. In particular, fiscal measures may affect housing-related decisions via the taxation of imputed rent on own houses, the deductibility of mortgage interest payments from income tax, and capital gains taxes on the revenue of selling a house. This is relevant to this study and has implications on accessibility and affordability of housing finance by low income urban households.

Another study by Wolswijk (2008) assesses the role of fiscal instruments in housing and mortgage markets in Europe. The aim of the study was to assess how fiscal policy instruments influence housing market developments in the Euro area countries. The study first describes the current set-up of fiscal housing instruments in euro area countries in year 2007. Then, the potential of fiscal instruments for preventing or correcting housing market imbalances is discussed. The findings of the study was that the fiscal aspects of mortgage debt and house price changes are sometimes underexposed in discussing measures to limit housing market volatility. Assuming an intervention in the housing market to be required, either for preventing or for correcting some disequilibrium, fiscal instruments may be useful as housing markets still are predominantly national in nature. Such measures need to be targeted to the specific situation and national circumstances. This is relevant to our study. Structural fiscal measures such as reducing mortgage interest relief and increasing reliance on quick adjustments of tax bases to market price developments appear to be useful options for governments for limiting growth rates of mortgages and house prices. This will contribute to enhancing access to affordable shelter to low income urban households.

3.2.2 Studies on Effects of Monetary Policies on Housing Finance

Apergis (2003) analyses the dynamic effects of specific macroeconomic variables (i.e. housing loan rates, inflation and employment) on the price of new houses sold in Greece. The aim of the study was to empirically investigate the effects of the variables on the price of new housing sold in Greece. An error correction vector autoregressive (ECVAR) model is used in modeling the impact of the above variables on housing prices. The empirical analysis was carried out using quarterly data from 1981 to 1999. ECVAR is an econometric model which is used for analyzing the interrelation of time series and the dynamic impacts of random disturbances or innovations on the system of variables. The findings were that *firstly,* variance decomposition shows that the housing loan rate is the variable with the highest explanatory power over the variation of real housing prices followed by inflation and employment. Variance decomposition shows the proportion of the movements in the endogenous variable sequence as a result of its own shocks against shocks to other variables.

Ahearne et al. (2005) examines periods of pronounced rises and falls of real house prices since 1970 in eighteen major industrial countries, with particular focus on the lessons for monetary policy. They studied the behavior of key financial and macroeconomic indicators around the times of peaks in house prices by calculated the median value of these indicators around all the forty-four peaks in their sample. The findings were that real house prices are pro-cyclical—commoving with real Gross Domestic Product (GDP), consumption, investment, Consumer Price Index (CPI), inflation, budget and current account balances, and output gaps. House price booms are typically preceded by a period of easing monetary policy, but then diminishing slack and rising inflation lead monetary authorities to begin tightening policy before house prices peak. Monetary policy therefore have some effect on house prices and this has implication on accessibility and affordability of housing by low income urban households who not may afford some houses due to prices relative to their income levels.

Secondly, impulse response functions show that a positive shock in the housing loan rate decreases real housing prices and will eventually strengthen housing demand, while a positive shock in inflation and employment increases real housing prices and will eventually lead to lower housing demand. The impulse response functions are used to produce the time path of the dependent variables in the VAR, to shocks from all the explanatory variables. *Thirdly,* real estate cycles i.e. periods of excess building, followed by contraction in construction are primarily affected by shocks in the form of fiscal and monetary policy. *Finally,* the mortgage interest rate is a very important variable that influences the decisions on whether or not to buy a house. When the rate increases people are prevented from buying houses, therefore the demand for houses decreases. The above findings imply that policies affecting mortgage interest rate should be well formulated as they have a big influence on decisions on whether to buy a house or not. This has implication on housing finance accessibility and affordability by low income urban households.

Gupta and Ndahiriwe (2008) investigate the effectiveness of monetary policy on house prices in South Africa, before and after financial liberalization. The main aim of the investigation was to deduce whether monetary policy plays an important role in affecting house price inflation in South Africa, and, whether or not, the result is sensitive to deregulations in the financial market. They use both impulse response and variance decomposition analysis performed on SVARs. The importance of the analysis lies in determining whether house price inflation is purely exogenous, i.e. explained only by itself, or is determined by monetary policy actions. The study found that, irrespective of house sizes, during the period of financial liberalization, interest rate shocks had relatively stronger effects on house price inflation, a finding which is relevant to our study as house price inflation will have implication on accessibility and affordability of housing finance. However, given that the size of these effects were nearly negligible, the result seems to indicate that house prices are exogenous, and, at least, are not driven by monetary policy shocks.

Smetse and Jarocinski (2008) evaluates the role of the housing market and monetary policy in US business cycles over the period 1987:1 to 2007:2 using an identified Bayesian Vector Autoregressive (BVAR) model. The aim of the study was to examine how monetary policy affects the housing market and also the implications of house price developments for the stance of monetary policy. The Study implements a version of a Monetary Conditions Index (MCI) due to Céspedes et al. (2006), which includes the federal funds rate, the long-term interest rate spread and real house prices, to measure the stance of monetary policy. Their findings were that, in spite of the endogeneity of house prices to both the state of the economy and the level of interest rates, taking house prices into account may sharpen the inference on whether the stance of monetary policy has changed over time. Given the uncertainty about the sources of business cycle fluctuations and the impact of the various shocks including housing demand shocks on the economy, uncertainty regarding the stance of monetary policy remains high. Nevertheless, taking the development of house prices into account, there is some indication that monetary conditions may have been too loose in 2004 and relatively tight in the summer of 2007. This implies that monetary policy may have effects on the prices of houses; an issue of importance when dealing with accessibility and affordability of housing by low income urban households.

3.3 Studies on HFI's Savings Mobilization and Lending Practices

The section reviews studies on savings mobilization and lending practices by HFIs that inhibit accessibility of housing finance by low income urban households. Studies on savings mobilization practices by HFIs are initially reviewed followed by a review of studies on lending practices.

3.3.1 Savings Mobilization Practices

Shankatu and Evans (2006), investigates the role of commercial banks in mobilization of savings for low income housing in South Africa. The aim of the study was to gain more insights into how banks mobilize savings to make housing finance more accessible to low income households. The study uses naturalistic enquiry of five banks and a leading housing organization. Naturalistic enquiry is a qualitative research method that emphasizes the importance of studying an issue in its natural context using observation, case studies, open-ended interviews, and ethnographic methods. The findings were that some banks like Standard bank, ABSA, PEP Bank and ITHALA have developed saving products aimed at low income housing finance. The aim is to mobilize savings into the housing sector. However most of the products developed were at a pilot phase and none are applicable throughout the country. The study also found that banks maintained that they are private business entities with their own guidelines and regulations and whose main objective is to maximize returns for shareholders. This being the case they can not waive all bank charges on savings accounts for the low income groups. There is also a limit to which they will compromise on risk, cost and profitability when dealing with low income groups. The study concluded that the low income groups require a different model that is suited to their needs and call for new ways of thinking and doing business. Banks should develop saving products which target low income groups, this will enable them save towards their housing and will enhance access to affordable and adequate shelter.

Rudolf (2007) evaluates the mobilization of savings by banks for low income housing in Botswana. The aim of the study was to shed some light on the key issues facing the low income households as they seek to mobilize the finance necessary to access adequate and affordable housing. He carried out a survey of financial institutions and housing-related government agencies in May 2007. Financial and economic data from a number of sources, particularly the Bank of Botswana and the Central Statistics Office, are used in the study. Supplemental information was garnered from interviews with a range of people in the banking; housing and housing finance sectors. General information garnered during the course of the researcher's permanent presence in the country was also used. The study concludes that there are concerns about the effective exclusion of the low-income or unwaged segments of the population from access to banking services, due to savings product design and selection criteria practiced by the HFIs. Essentially the structuring of banking products and services reflects a belief that there is little or no profit to be made from serving low-income. The high level of bank charges, pose a barrier to the low-income group accessing saving accounts services, effectively excluding this sector from the customer base. The commercial banks are answerable to their shareholders and consequently the granting of loans and maintenance of savings accounts are subject to strict business risk mitigation principles. The practices employed by HFIs exclude low income groups from maintaining savings accounts and accessing loans; this has serious implication on accessibility and affordability of housing by the low income groups.

Gardner (2007) assesses savings mobilization for housing finance in Zambia. The study was meant to update findings of a more extensive study into Zambia's housing finance sector that he had previously undertaken in 2004. The aim of the study was to gain more insights on the key issues facing the poor as they seek to mobilize the finance necessary to access adequate and affordable housing. His study included interviews with key practitioners in the housing finance sector. The findings were that *firstly,* current housing finance developments focus on the relatively 'easy pickings' of offering mortgages to high net worth individuals. Savings mobilization is also targeted to the same group of people as these are the people who can meet the minimum deposits required. Given the very thin market for conventional mortgage finance products, attention to alternative housing financing mechanisms such as smaller non-mortgage instruments, alternative construction processes like incremental and their consequent finance demands, is timely. This highlights the need for the development of appropriate housing finance savings products that meet the needs of the entire Zambian population and not just the very few who can afford mortgage finance.

Opportunities in respect of incremental housing delivery and financing, and the attention and performance of the micro finance industry, are critical areas for development. *Secondly,* Specific interventions around pension and provident fund-backed housing lending are starting to emerge in Zambia. Without a doubt pension and provident fund resources offer the largest untapped source of capital that could be directly and relatively easily linked to housing purchase and improvement by thousands of ordinary employees. The benefits that such mechanisms could offer pension and provident fund members is also significant, given the low average returns on pension investments and the high and rapidly escalating costs of housing. Further, specific approaches to encouraging housing investments from the pension and provident funds warrants investigation. Capital markets play an important role in mobilizing and allocating long term funds held by institutional investors such as pension schemes to key sectors of a country's economy's. *Finally,* HFIs saving mobilization practices exclude majority of the low income groups and other ways of addressing their plight needs investigation. This finding is relevant to this study in that by looking for other opportunities and approaches to dealing with low income group's accessibility and affordability of housing finance will be enhanced.

Laura and Jason (2009) explore savings mobilization in the housing finance sector in Malawi. The aim of the study was to explore the key issues facing the low income households as they seek to mobilize the finance necessary to access adequate and affordable housing. They base their study on FinScope survey which is a national-level survey of individual usage of financial services carried out in Malawi in 2008. Using individual based representative sample at district level, 4,993 face-to-face interviews were conducted. Questionnaires were also piloted and administered in Chichewa. Their findings are that *firstly*, the cost of operating a savings account in the HFIs is relatively high in Malawi; as a result less than 5 percent of people say they use their savings or borrow money for the purpose of investing in land or a dwelling. *Secondly*, the low income people also found it difficulty to operate savings accounts due to minimum deposit requirements and identification requirements set by the HFIs. *Thirdly*, access to formal sources of finance from regulated banks (19 percent) and other formal institutions (7 percent) is fairly good compared to regional peers. However, the number of individuals who are financially excluded is particularly high (55 percent), especially in rural areas (58 percent) and amongst the lower income earners. This was attributed to the branching requirements which some of the HFIs could not meet and could therefore not open branches. Saving mechanisms need to be established to enable people have saving for their housing needs. The study is relevant in that the HFIs have not come up with saving mobilization practices which target the low income people and this impact on their being able to access and afford housing finance.

3.3.2 Lending Practices

Hoek-Smit (1998) examines lending practices by banks in Bangladesh. The study builds on previous efforts to formulate recommendations for improving access to housing credit for various groups of presently underserved urban and rural households. The earlier reports had identified housing finance as one of the constraints in improving housing in urban areas, but it did not include an analysis of the sector. The findings of the study were that the present terms on individual housing loans for the Nationalized Commercial Banks (NCB) are 10 year discretionary adjustable rate mortgages just decreased from 15 years. The loans are offered at 16 percent compounded interest rates per annum and a maximum Loan to Value Ratio (LTV) of 50 percent of total cost including land. The allowable LTV ratio is higher for housing societies. The maximum loan amount is decided on the basis of the net rental value of the property and can be as high as 100 percent of the Net Rental Value (NRV) if the owner does not live on the premises. The average loan size is Tk.1.5 to 2.5 million; similar to Bangladesh House Building Finance Corporation (BHBFC). Loans to bank staff are generally smaller, the interest rate is set at the bank rate (presently at 8 percent) and the value of the land is taken as equity. The above lending conditions eliminate leading to low income groups as they can not meet such stringent conditions. This has implication on accessibility and affordability of house finance by low income urban house holds.

Smets (1999) investigates the affordability criteria for the urban poor in India. The aim of the study was to examine affordability criteria used by the Indian housing finance sector in relation to the urban poor. The fieldwork for the study took place in 1993± 94 in Hyderabad, India. Results show that formal housing finance is the product of the perceptions that prevail among the middle and upper classes, who as policy-makers, economists and managers, determine how housing finance institutions fix the terms and conditions of housing loans for the urban poor. They use affordability criteria that fit the purchase or construction of a house in one go. However, affordability criteria for the urban poor have to be linked with practices of incremental building and consequently incremental financing. Failing to do so leads to serious mismatches between the, demand and supply of formal housing finance for the urban poor. To be able to serve the poor adequately, the middle and upper classes should stop aiming at the financing of housing constructed in one go. Instead, they should open their minds to the building and financing practices of the urban poor. This study has relevance to our study in that the lending practices inhibit housing finance accessibility to low income groups as the products designed do not meet their needs.

Another study carried out in South Africa by Shankatu and Evans (2006), assesses the lending practices by commercial banks to low income households. The aim of the study was to gain more insights into how banks make housing finance more accessible to low income households. The study uses naturalistic enquiry of five banks and a leading housing organization. Naturalistic enquiry is a qualitative research method that emphasizes the importance of studying an issue in its natural context using observation, case studies, open-ended interviews, and ethnographic methods. The main findings of the study were that commercial banks exclude low income households from accessing housing finance loans with which to resolve their housing problem. However there is potential for banks to expand in this area of housing finance, factors such as risk, and cost minimization as well as lack of research constrain this potential. The study concluded that the low income groups require a different model that is suited to their needs and call for new ways of thinking and doing business. This will enhance access to affordable shelter by low income urban households.

A similar study evaluating lending practices for housing by commercial banks in Thailand was carried out by Pornchokchai (2007). The aim of the study was evaluate the lending criteria employed by commercial banks in Thailand. The methodology of the study was a review of relevant literature, review of related websites on housing, housing finance, financial institutions and public finance. Face to face interviews with Thai experts involved were also conducted. Results show that as of December 2006, a loan must not be more than 85% of the properties appraised and/or market value. For Commercial Building Loans, it will not be more than 75% of appraised and/or market value. Borrowers can borrow no more than 40 times the monthly salary and 15 times other income. A self-employed person can borrow no more than 40 times his or her monthly income with a maximum loan term of 30 years. The borrower's age plus borrowing terms must not exceed 70 years.

Documents required for the loan application are; loan a application, a photocopy of the house registration, a photocopy of one's personal ID, a photocopy of the marriage certificate, a divorce or death certificate, a photocopy of name change, if any, financial documents, collateral documents, and a map showing approximate collateral location. In the case of co-borrowers, each must submit his or her application and all required personal and financial documents. In the case of interest, it will be the Minimum Retail Rate (MRR), which is approximately 7.75%. In the case of a fixed rate for the first three years, it would be MRR-1.5%, MRR-1.25% and MRR-1.0%, respectively. The lending criterion excludes low income groups who do not have documented incomes. The study is relevant to our study in that the practices employed by bank exclude the low income groups and this impact on their ability to access adequate shelter.

3.4 Studies on Incentives that Facilitate Housing Finance Accessibility

This section reviews studies on incentives that facilitate housing finance accessibility by low income urban households. Studies on subsidies that facilitate housing finance accessibility are reviewed first, followed by studies on tax incentives that facilitate housing finance accessibility. Finally, studies on other incentives that facilitate housing finance accessibility are reviewed.

3.4.1 Subsidies

Tang et al. (1998) investigates housing subsidies being one of the principal instruments used by the government of the Philippines to provide targeted households access to decent housing. The aim of the study was to measure the different types of subsidies provided in the housing sector and determine the incidence of the benefits of the subsidies. Computation of various subsidies was undertaken and where one goes beyond one year the present value of each was calculated. The study looked at the subsidy both from the demand beneficiary side and the supply funding agencies, government side to create a complete picture of who benefits and who pays for the subsidy as per program design. The findings were that the present housing finance system provides large implicit and explicit subsidies that do not reach the target clientele and that the subsidy scheme is provided at a huge fiscal cost and creates incentive problems for various players in the housing market. In particular, the government's subsidized credit program hinders the participation of private sector financing in the housing market. This study informs our study in that subsidies need to be better targeted to achieve desired results. This will go along way in addressing the accessibility and affordability of housing challenges faced by low income urban households.

Another study by Heged¨us et al. (2004) examines the impact of two types of subsidy schemes – mortgage interest rate write-downs, both universal and income targeted, and income-targeted down-payment subsidies – on the housing purchase capacity and the potential demand for mortgage loan volume in two very diverse markets; Budapest and Moscow. The aim of the study was to assess which of the two types of subsidy schemes was better in stimulating housing purchase capacity. The study used an accounting model that performed detailed calculations at the household level using information on household resources income, savings and home equity, mortgage terms and conditions, and housing costs, unit prices plus an assortment of closing costs. The study's findings were that the down-payment subsidy is found to be better in both markets at stimulating housing purchase capacity in terms of efficiency and the distribution of subsidies in favour of low and moderate-income families. Governments should endeavor to use down payment subsidies other than mortgage interest write downs, as the latter has better impact stimulating housing purchase by low income groups. This has far reaching implication on accessibility of adequate and affordable shelter by low income urban households.

DeVerteui (2005) explores the relationship between government assistance and housing outcomes, among extremely low-income individuals in Los Angeles USA. The aim of the study was to illustrate the relationship between government assistance, housing subsidies and/or welfare payments and housing outcomes. The study uses qualitative methods and a sample of 25 extremely low-income, homeless women at an emergency shelter in Central Los Angeles. The study's findings were that there was entirely inadequate government-supported housing policy for extremely low-income individuals. The 1996 federal welfare reform only exacerbated this penurious situation, making it more difficult for extremely low-income individuals to obtain welfare payments. The study called for better targeting of subsidies so that the desired results are achieved. This is relevant to our study in that it is only through targeting incentives such as subsidies that the housing finance accessibility and affordability challenges encountered by low income urban households can be addressed.

Nyasulu and Cloete (2007) investigate the unaffordability of housing and limited access to finance as limiting factors to the provision of adequate housing in the urban areas in Malawi. The aim of the study was to understand what types of government subsidies exist, to alleviate the situation. Primary data were collected by means of questionnaires followed up by semi-structured personal interviews. These interviews were conducted with all major role players in the urban housing finance industry. Secondary data were obtained through scrutiny of the stakeholders' relevant official records and reports kept at their offices. The subset of analysis was chosen to be the local authorities of Blantyre, Zomba, Lilongwe and Mzuzu. Results show that finance from the formal sector is accessible to fewer than 35 per cent of the urban population and less than 16 per cent of households in the major urban areas can afford an average house. No government subsidies are available for end users and development financing is limited and extremely dear. The contribution from nonconventional finance sources to housing finance is negligible. The study suggested that the use of various instruments may alleviate the situation. Such instruments could include a housing tax for the implementation of subsidies, subsidies from developed countries, the formation of cooperatives and the implementation of securitization. The finding is relevant to our study; use of various instruments will alleviate the challenges faced by low income urban households in accessing affordable shelter.

3.4.2 Tax Incentives

McClure (2000) analyses a sample of developments from Missouri USA during the first 10 years of the Low-Income Housing Tax Credit (LIHTC) program. The aim of the study was to assess how well the LIHTC as an aid to housing finance has worked. A sample of 142 developments, including projects granted tax credits beginning in 1987 and running through 1995, was selected from the Missouri Housing Development Commission (MHDC's) entire portfolio. The findings of the study are that the tax credits are syndicated, with virtually all of the syndication proceeds about 33 percent of the financing used to pay for development costs. Conventional lending provides another 44 percent of the financing. Unfortunately, because these sources do not cover all of the costs, developers enter into a complex, costly process of layering additional subsidies, one on top of another, to fully finance the development. It has been established that the tax credit is a very inefficient subsidy delivery mechanism.

If the federal government grants tax credits of $1,000 ($100 a year for 10 years), then the present value of these credits to the government is about $780, discounting at the government's long-term cost of borrowing. When evaluating tax credits as an investment, however, investors employ an even greater discount rate, found here to be about 11 percent. This means that the $780 of housing subsidy from the government will produce only $590 in housing. Clearly this is a significant loss of value (about 24 percent) from the use of tax credits as the vehicle to deliver the housing subsidy. The study calls for better implementation of the low income housing tax credit to enable it deliver housing subsidy efficiently. This has implication on accessibility and affordability of housing by low income urban households.

A similar study by Wood et al. (2005) estimates the potential housing market impacts of a tax credit targeted on rental housing affordable to low-income Australian households. The aim of the study was determine if the LIHTC has had any impact on rental housing affordability by low-income Australian households. The study used a Micro Simulation model of the Australian housing market to examine the probable impacts of a LIHTC. Micro Simulation models are computer models that operate at the level of the individual behavioral entity, such as a person, family, or firm. The models simulate large representative populations of these low-level entities in order to draw conclusions that apply to higher levels of aggregation such as an entire country. The results show that, the LIHTC proposal has modest impacts on housing affordability stress among low income tenants. Among tenants belonging to the poorest 20 per cent of Australian households, 77 per cent have housing costs greater than 30 per cent of household income and after the introduction of LIHTCs, this falls by only 5 percentage points, to 72 per cent of poor tenants. This finding is in part explained by an offsetting reduction in direct demand subsidies. There is also poor targeting of this proposed LIHTC measure, because landlords remain eligible regardless of the income of the tenant occupying their property. As a consequence, many low-income households receive only part of the low income housing tax credit benefits that are passed on into lower market rents. The study calls for better targeting of LIHTC and therefore has relevance to our study as addressing the issue will enhance accessibility to adequate shelter by low income urban households.

3.4.3 Other Incentives

Cities Alliance ACCION International (2007) conducted a case study in Peru on the attempts of the various actors in the housing finance arena there, to improve access to housing finance at the bottom of the pyramid. The information in the case study is based on interviews conducted in

2006, with key informants primarily program managers, as well as available primary and secondary data. The study focused on a comparison of three approaches to low income housing finance; the Mivivienda and Techo Proprio programs of the Government of Peru and the Micasa loan product of the microfinance institution, Mibanco. The study found out that intervention through direct subsidy to the end customers has not worked in Peru, as the 75 percent default rate of materials bank attests. The Peruvian government has created specific mortgage loan products and mechanisms to deliver loans via the private financial system, which have proven to be more successful than direct subsidies. Micasa an unsubsidized loan product developed by a microfinance bank, has however been more successful at reaching more low income families. This study has relevance in our study in that it shows that housing microfinance can be used to reach more low income households through the products they develop.

Select Committee on Housing Affordability in Australia (2008) carried out a study on behalf of the senate of the Australian government analyzing housing affordability in Australia in June 2008. The aim of the study was to assess the impact of First Home Owners Grant (FHOG) on improving housing affordability. The study was carried out through interviews with housing experts in all mainland capitals. Over 100 submissions were received. The findings were that the current FHOG was introduced in 2000 as a $14 000 payment to first home purchasers of new dwellings and $7 000 for the purchase of existing dwellings. The scheme is now a $7 000 payment for all first home purchasers. The committee received evidence that the FHOG has had an inflationary effect which has benefited existing home owners rather than those seeking to enter the market. The study calls for better implementation and targeting of incentives and therefore has relevance to our study.

3.5 Latest Empirical Research Focus

There has been different empirical research focus in both in developed and developing countries. The main research focus in developing countries of Sub-Saharan Africa and Asia has been on access of housing finance by low income groups and on how to enhance this access. The authors who have carried out research on this include: Smets, 1999 in India; Shankatu and Evans, 2006 in South Africa; Pornchokchai, 2007 in Thailand; Nyasulu and Cloete, 2007 in Malawi; Cities Alliance ACCION International, 2007 in Peru; Gardner, 2007 in Zambia; Ruldolf, 2007 in Botswana; and Laura and Jason, 2009 in Malawi. Another area of focus has been on deducing whether monetary policy plays an important role in affecting house price inflation. Gupta and Ndahiriwe (2008) carried out this research in South Africa.

In developed countries the focus has been *firstly,* on analyzing housing affordability (Select Committee on Housing Affordability, 2008 in Australia; Boleat, 2008 in Britain), *secondly,* better targeting of housing incentives and subsidies (Heged¨us et al., 2004 in Moscow; McClure, 2000 in USA; DeVerteui, 2005 in USA), *thirdly*, effects of fiscal instruments on housing, house prices and mortgages (Wolswijk, 2005 and 2008 in EU), *fourthly*, on effects of macroeconomic variables on house prices (Wong and Phang, 1997 in Singapore; Apergis, 2003 in Greece; and Vries et al., 2004 in several European countries), and *finally*, on how monetary policy affects the housing markets (Berry and Dalton, 2004 in Australia; Ahearne et al., 2005 in 18 major industrialized countries; Smetse and Jarociński, 2008 in the USA).

3.6 Summary

A number of findings emerge from the review of the empirical literature. *Firstly*, the government's fiscal policies affecting housing have to be carefully crafted and implemented as they may have a strong influence on house price development. *Secondly*, monetary policies affect mortgage interest rate and should be well formulated as they have a big influence on decisions on whether to buy a house or not. For example the method and timing of adjustments in the tax system have a strong influence on house price development, while interest rate policy is a very blunt instrument to attempt to control complex and highly segmented housing markets. *Thirdly*, subsidies and tax incentives have been found to stimulate housing purchase capacity in favour of low and moderate-income families; however better targeting and implementation will assist to free resources for more effective use elsewhere. The subsidy scheme is provided at a huge fiscal cost and creates incentive problems for various players in the housing market.

Fourthly, direct access to housing finance from banks for the low income urban households, is extremely difficult due to lending practices, product design and selection criteria. The formal financial institutions prefer lending to those with established credit records and regular incomes to ensure payment of monthly installments. They also prefer borrowers that have some sort of collateral. Most poor do not have formal credit records, regular incomes or collateral. *Fifthly*, the poor tend to build, improve and expand their houses step-by-step as and when their incomes permit. Opportunities in respect of incremental housing delivery and financing, and the attention and performance of the micro finance industry, are critical areas for development. *Finally*, specific approaches to encouraging housing investments from the pension and provident funds warrant investigation. In liberalized financial systems, capital markets play an important role in mobilizing and allocating long term funds held by institutional investors such as pension schemes to key sectors of a country's economy's.

CHAPTER FOUR

4.0 CONCLUSION AND RECOMMENDATIONS

This chapter gives the overall summary of the study. The chapter has been divided into four sections. The first section summarizes the key findings from the study. The second section lists the knowledge gaps identified, while the third section identifies the possible areas for further research. The final section concludes the study.

4.1 Key Findings, Discussion and Recommendations

Six key findings emerge from this study. *Firstly,* the concepts of accessibility and affordability of housing finance have different definitions based on country and region. There is need to develop an understanding of what is meant by accessibility and affordability of housing finance and come up with some agreed measures and ways to analyze accessibility and affordability in the developing countries context. Unless this necessary methodological groundwork is laid it is likely to prove difficult to reach an agreement on the exact dimension and geographic extent of the issue. In short, it is necessary for policy makers, researchers and others to be speaking the same language, or to be able at least to understand one another when they are talking about housing finance accessibility and affordability.

Secondly, the study affirms that accessibility and affordability of housing financc is a large and widespread problem in both developed and developing countries. Causes of accessibility and affordability problems are complex and diverse with major driving factors found both within and beyond the housing system. Households most at risk of facing the multiple problems that arise from a lack of affordable housing are low income urban households. Studies reviewed attribute lack of accessible and affordable housing finance as the biggest challenge facing low income urban household in meeting their housing needs. Although the various housing finance policies implemented over the last three decades posses great potentials to improving housing finance delivery, there is need to rethink and repackage some policies so that majority can benefit from them. The bedrock policy underpinning access to affordable housing, are stable macroeconomic policies that maintain downward pressure on interest rates as well as well crafted, fiscal policies that will affect development of house prices positively as relates to the low income urban household. Our findings indicate that fiscal policies affect housing prices development and monetary policies affect the mortgage interest rate and these two variables affect accessibility and affordability of adequate housing by the low income urban households. The study recommends that fiscal and monetary policies that affect housing be well crafted and implemented.

Thirdly, direct access to housing finance from banks for the low income urban households, is extremely difficult due to lending practices, product design and selection criteria. Essentially the structuring of banking products and services reflects a belief that there is little or no profit to be made from serving low-income urban households. The aim of the formal finance sector is at the financing of housing constructed in one go. There is therefore need for a different model that is suited to the needs of low income urban households; new ways of thinking and doing business are called for. Formal sector finance institutions should open their minds to the building and financing practices of the low income urban households. This study recommends that housing finance accessibility and affordability criteria for the low income urban households be linked with practices of incremental building and consequently incremental financing. Failing to do so, leads to serious mismatches, between the demand and supply, of formal housing finance for the low income urban households. The lack of access to credit for the poor is also attributable to practical difficulties arising from the discrepancy between the mode of operation followed by financial institutions and the economic characteristics and financing needs of low-income households. For example, commercial lending institutions require that borrowers have a stable source of income out of which principal and interest can be paid back according to the agreed terms. However, the income of many self employed households is not stable, regardless of its size. A large number of small loans are needed to serve the poor, but lenders prefer dealing with large loans in small numbers to minimize administration costs. They also look for collateral with a clear title - which many low-income households do not have. In addition bankers tend to consider low income households a bad risk imposing exceedingly high information monitoring costs on operation.

Fourthly, the role of microfinance in improving accessibility and affordability has not been explored. The study showed that the most critical challenges in housing finance lie in developing ways to make finance accessible to the poor. There is need to carry out research on the role of microfinance in improving housing finance accessibility by low income urban households. Although some efforts have been made in this direction, they remain modest and of limited impact. To go to scale, it is important to develop institutional mechanisms for expanding substantially the volume of housing microfinance, primarily through the capital market. The study therefore recommends that research on how microfinance can be used in enhancing access to house finance be undertaken.

Fifthly, the impact of capital markets in mobilizing pension funds for financing low income housing has not been adequately investigated particularly in the developing countries. Funds for low cost housing can be raised through issuance of housing bonds through the capital markets. In liberalized financial systems, capital markets play an important role in mobilizing and allocating long term funds held by institutional investors such as pension schemes to key sectors of a country's economy's. In South Africa, pension administrators raise housing finance through the capital markets by issuing pension-backed securities to enable members to acquire home ownership. The present approach of leaving housing provision to the vagaries of market forces would not be expected to provide affordable housing to the low income households. Mobilization of savings and investments is central to housing development, therefore given the accumulated magnitude of unmet need for low income urban households housing and recognizing the many other demands on government, policies which can attract substantial investment from private institutional investors including pension funds must be a priority. The study therefore recommends that research on how capital markets can be used as an avenue of harnessing funds from pension schemes and channeling these funds into housing finance be carried out.

Finally, there should be better targeting of subsidies and tax incentives. This will make them more efficient and at the same time reach the desired targets. Fiscal and monetary policies should also be applied properly for them to achieve the desired effects. Application of wrong housing finance policies to solve economic problems being encountered by millions or even billions of individuals/families in a sovereign country could have a devastating effect on that economy, whether developed or emerging. In his study in the Philippines, Tang et al. (1998) concludes that the present housing finance system provides large implicit and explicit subsidies that do not reach the target clientele and that the subsidy scheme is provided at a huge fiscal cost and creates incentive problems for various players in the housing market. A study by the Select Committee on Housing Affordability (2008) in Australia also concluded that the FHOG had an inflationary effect which benefited existing home owners rather than those seeking to enter the markets, who were the main target of FHOG.

4.2 Knowledge Gaps Identified

A number of knowledge gaps arise from the analysis of the issues examined in this study. *First*, there is minimal understanding of the concepts of accessibility and affordability of housing finance. There is need of coming up with some agreed measures and ways to analyse accessibility and affordability in the developing countries context. Unless this necessary methodological groundwork is laid, it is likely to prove difficult to reach agreement on the exact dimension and geographic extent of the issue. In short, it is necessary for policy makers, researchers and others to be speaking the same language, or to be able at least to understand one another when they are talking about housing finance affordability and accessibility. Ambiguity in the conceptualization of housing finance accessibility and affordability is also linked to different understandings of its causes and drivers, in particular, the degree to which the issue stems from inadequate incomes for working families or inadequate housing.

The *second* gap identified relates to minimal empirical insights on impacts of pension funds on accessibility and affordability of housing finance in most developing countries particularly in sub-Sahara Africa. Use of pension funds for housing has been very successful in both Singapore and Mexico. The two are classified as high-income economies and -middle-income economies respectively by the World Bank unlike most of the sub-Sahara African countries which fall under the low income economies. An empirical analysis of how capital markets can be used as an avenue of harnessing funds from pension schemes and channeling the funds into housing to enhance access therefore needs to be undertaken. In Singapore the HDB is a statutory board which was created in 1960 and uses the country's Pension funds low-cost government-built houses. HDB is credited with clearing up the squatters and slums and resettling residents in these houses to the extent that 80-90% of Singapore residents live in HDB flats. Under the Mexican pay-as-you go pension system, employers, employees and government together contribute 15% of a workers salary for retirement and housing benefit. The success of the institutional framework has led to an increase in house production in 2003-2005 of 45% and the goal was to produce 750,000 housing units in 2006.

The *final* gap identified is that there is little empirical analysis on the impact of microfinance on accessibility and affordability of housing finance. An empirical analysis of how microfinance can be used in enhancing access to house finance should be undertaken. Micro lending is a rapidly growing sector in most developing countries, and the 'respectable' end of the micro lending industry must be examined for potential housing finance involvement. A study carried out by Cities Alliance ACCION International (2007) in Peru showed that Micasa an unsubsidized loan product developed by a microfinance bank, has been successful at reaching more low income families. Information is also lacking on evaluation benchmarks for housing micro-finance institutions and their products; the mobilization of resources for housing micro-finance from the capital market, including the use of guarantees; as well as the compilation, updating and dissemination of data on housing microfinance; this needs investigation.

4.3 Possible Areas for Further Research

In terms of accessibility and affordability of housing finance, definition and measurement research is needed which would develop, in the context of each developing countries, a number of measures of accessibility and affordability capable of being applied at a local level. These measures would need to be fully traversed with key stakeholders to obtain their buy-in. This acknowledges that there is a range of uses research, policy and delivery of accommodation support such measures might be put to. Once agreed measures of accessibility and affordability have been settled on, it would then be possible to scope across each country the local variation in accessibility and affordability. The focus should be on low income urban household who are most exposed to unsustainable levels of housing costs. It would also at this point be important to obtain a good understanding of the trends in housing finance accessibility and affordability, at the local level. In our view the research emphasis here should be on low income urban households given the importance of this tenure to the achievement of the government's wider housing policy objectives.

The *second* research strand should focus on research on use of pension funds in developing countries as a solution to the challenges faced by low income urban households in accessing and affording housing finance. The research should be on how capital markets can be used as an avenue of harnessing funds from pension schemes and channeling these funds into housing finance. The legal aspects of employing pension fund capital in low cost housing finance provision and the mechanisms to achieve it with suitable intermediaries need to be investigated. It would appear that there is a need for some linkage mechanism to be created between pension funds and the retail finance provision level. This role would have to be played either by government or an NGO. The structure of such an entity and its role need to be identified. Reviewed literatures indicate that developed countries have used pension funds in their housing finance successfully. Without a doubt pension and provident fund resources offer the largest untapped source of capital that could be directly and relatively easily linked to housing purchase and improvement by thousands of ordinary employees. The benefits that such mechanisms could offer pension and provident fund members is also significant, given the low average returns on pension investments and the high and rapidly escalating costs of housing.

The *third* research strand should focus on the role of microfinance on accessibility and affordability of housing finance. Micro lending is a rapidly growing sector in most developing countries, and the 'respectable' end of the micro lending industry must be examined for potential housing finance involvement. Research on the development of evaluation benchmarks for housing micro-finance institutions and their products; the mobilization of resources for housing micro-finance from the capital market, including the use of guarantees; as well as the compilation, updating and dissemination of data on housing microfinance.

4.4 Conclusion

The literature reviewed confirms that low income urban households face a lot of challenges in accessing affordable and adequate shelter. Empirical literature reviewed indicated that housing finance policies designed in various developing countries have not properly targeted the low income urban households and have therefore not worked in helping meet the housing finance accessibility and affordability problems. Studies reviewed also indicated that current practices by formal finance systems have not helped the low income urban households meet their housing needs as most of them consider them unbankable, with their product designs and lending practices excluding them.

The review shows that there is no single definition of the concepts of accessibility and affordability of housing finance and these needs to be defined and measurements agreed based on each country or location. Once, the definitions and measurements, have been agreed on they should be tested on the low income urban households to establish the depth and breadth of the housing accessibility and affordability issues. When established, the causes of the local variations and the decline or improvement of accessibility and affordability over time can be analyzed. An understanding of the causes of the housing accessibility and affordability problem at the local level will be necessary to enable the development of potential solutions. A comprehensive strategy for the development of likely options for overcoming housing accessibility and affordability issues will need to be developed which would provide an appropriate amount of affordable housing to the right individuals and groups in the required locations. Housing finance accessibility and affordability is a dynamic problem and consequently any strategies need to be flexible so they can be adjusted to take into account changes in market conditions.

The study recommends research on how capital markets can be used as an avenue of harnessing funds from pension schemes and channeling these funds into housing finance. This will address the accessibility and affordability of housing finance challenges faced by low income urban households.

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Annexes

Annex 1 : The Evolution of Housing Finance Policies

Phase and approximate dates	Focus of attention	Major instruments used	Fiscal and monetary policies used
Modernization and urban growth: 1960s early 1970s	Physical planning and production of shelter by public agencies.	Blueprint planning; Direct Construction (apartment blocks, core houses) Eradication of informal settlements.	Government direct expenditure on housing plus provision of housing by employers.
Redistribution with growth/ basic needs: mid 1970s-mid 1980s	State support to self-help ownership on a project-by-project basis	Recognition of informal sector; Squatter upgrading and sites-and-services; Subsidies to land and housing.	Subsidies
The enabling approach/ urban management: late 1980s-early 1990s	Securing an enabling framework for action by people, the private sector and markets	Public/private partnership; Community participation; Land assembly and housing finance; capacity building.	Tax reliefs, Housing vouchers and VAT exemptions
Sustainable urban development: Mid 1990s onwards	Holistic planning to balance efficiency, equity and sustainability Adequate shelter for all' and 'Sustainable human settlements development' 8 Millennium Development Goals and 18 targets, including target 11 on slums	As above, with more emphasis on environmental management and Poverty alleviation. Culmination and integration of all previous policy improvements. Millennium Development Project.	Tax reliefs, Housing vouchers and VAT exemptions

Source: Based on UN-HABITAT, (2006)

Annex 2 : Examples of Housing Incentives in Other Countries

Country	Incentives
India	1994 National Housing Policy as transition of the Government's position on housing policy: stressing the importance of housing as an integral part of the national strategy for poverty reduction and employment. Focus on increased participation by the formal private sector; government's role is to create conditions for the expansion of housing supply through the removal of legal and regulatory Constraints and to support appropriate infrastructure investments.
South Africa	Implementing a social housing policy by redirecting fiscal spending and improving the efficiency of the tax collection system, preceded by a White Paper on Housing Policy and Strategy for South Africa in 1994.
Sri Lanka	New housing policy 2006; with a focused approach Sri Lanka managed to rebuild 98,000 houses damaged or destroyed by the Tsunami within 2 years. For a long time, utilizing Cooperatives to establish community-based low-income housing projects
The Use of Pension Funds for Housing: The Singapore Case	The Housing and Development Board is a statutory board and was created in 1960 and uses the country's Pension funds low-cost government-built houses. Residents in the low and middle income groups are allowed to use their Central Provident Fund (this fund is ranked 13th in retirement assets in the world) as down payment for their flats to the extent that it provides 98% of all the housing for this group. HDB is now credited with clearing up the squatters and slums and resettling residents in these houses to the extent that 80-90% of Singapore residents live in HDB flats.
The Use of Pension Funds for Housing: The Mexico Case	Under the Mexican pay-as-you go pension system, employers, employees and government together contribute 15%% of a workers salary for retirement and housing benefit. About 8.% goes to the Mexican Institute of Social Security (IMSS) which is a government agency responsible for providing retirement and other benefits; 2% is directed to the Retirement Saving System (SAR) and 5% to a National Housing Fund called INFONAVIT. Contributions to INFONAVIT (established in 1972) are used to provide housing loans to workers. In 2001, CONAFOVI was established to coordinate housing programs across federal agencies and the formal private sector. The success of the institutional framework has led to an increase in house production in 2003-2005 of 45% and the goal is to produce 750,000 housing units in 2006.
Germany, Austria, East European Countries:	The "Bausparkassen System" for contractual saving for housing.

Source: GOK, (2007a)

Annex 3 : *Proposed Housing Sector Incentives & Market Re-Engineering Measures in Kenya*

Type of incentive	Action points
1) Infrastructure Development Incentives	a) Budgetary allocation for the provision of infrastructure to urban and peri-urban land through public-private partnerships; b) Government to offer guarantees and concessions to private local and foreign investors to develop housing infrastructure; c) A 10-year tax holiday for developers and investors of a minimum of one hundred housing units or serviced plots of equivalent amount for low-income households within a period not exceeding twenty four months in urban and peri-urban areas. d) An investment deduction to the contractors that invest in the construction industry in terms of machinery and new appropriate technologies e) Tax deductibility for expenditure for social infrastructure such as construction of public and private schools, hospitals and any similar kind of social infrastructure.
2) Employers and Employees Incentives	a) Granting of accelerated industrial building allowance to a prescribed dwelling house for low-income employees from 2.5% to 10% per annum to an employer who constructs or purchases the house for the employee, and from 2.5% to 15% for an employer who constructs or purchases and transfers the house to the employee or; b) Offering employers 50% tax credit for every shilling that an employer spends on the purchase of an eligible employee's house provided that the maximum amount per annum shall not exceed five hundred thousand shillings; and the same should be treated as a non-taxable benefit for the employee; c) Exemption of employer-provided housing allowance and housing benefits for employees from their taxable income for persons with a basic salary not exceeding Ksh. 50,000 a month, provided the amount exempted shall not exceed 30% of their basic salary; d) Deduction of rent paid by employees from their taxable income for persons with a basic salary not exceeding Ksh. 50,000 a month, provided that an employee whose housing allowance has been exempted from taxation will not qualify for this deduction; e) Amendment of the Retirement Benefits Authority Act to provide for members to use their pension scheme funds as guarantee or collateral for housing loans; f) Government to take the initiative in the establishment and capitalization of a public-private owned mortgage insurance institution for credit enhancement to low-income households;
3) Savings Mobilization Incentives	a) Government Issuance of long-term Treasury Bonds (up to 30 years) to lengthen the maturity profile of debt instruments and create a yield curve for pricing long-term funds (debt and loans); b) Establishment of a guarantee scheme and tax concessions to

	promote enhanced utilization of micro-finance institutions for savings mobilization and the extending of credit to low income urban households; c) The Government to give a 10% bonus of the amount saved (up to KShs. 4000 per month) for a home ownership savings plan through crediting the account of savers earning less than 40,000 shillings per month; d) The government through prudential regulations should cause financial institutions to give more favourable terms to home savings accounts; e) Extension of the home ownership saving plan which requires the opening of an account to micro-finance institutions. f) Extend the term of Housing Bonds from 1 year to 5 years and reduce the withholding tax from 10% to 5%; and increase maximum interest amount from KShs. 300,000/= to KShs. 500,000/= per year.
4) Housing Finance Mobilization Incentives	a) Amendment of the Insurance Act to provide for members to use their life insurance scheme funds as guarantee or collateral for housing loans; b) The Government through legislation or prudential guidelines to encourage the introduction of multi-generational mortgage instruments to the Kenyan market; c) Zero rate VAT on building materials used to construct housing for low-income groups; d) The government to provide a rebate from stamp duty for low-income home buyers; e) Amend the Income Tax Act to allow for interest relief for house repayments under tenant purchase schemes at the same level with house mortgages.
5) Diaspora & Capital Markets Resource Mobilization Measures/Incentives	a) Establishment of a fully-fledged department within the Ministry of Finance charged with the responsibility of facilitating increased remittances from Kenyans living and working in the Diaspora; and a Council with membership drawn from key Ministries and other stakeholders to promote and coordinate the functions of the Department; b) Guarantees to National Housing Corporation (NHC) to enhance compliance with Capital Market Authority requirements to enable it issue the housing development and infrastructure bonds; c) Fast-track the introduction of securitization of mortgages through the establishment of a National Secondary Mortgages Corporation (NSMC); d) Fast-tracking of the gazettement of the Asset-Backed Securities regulations issued under the Capital Markets Act, Cap 485A e) Total exemption of stamp duty for mortgage backed securities

6) Housing Development Process and Slum Improvement Measures/Incentives	a) Identification of urban and peri-urban land for the development of housing for low income groups through public-private partnerships; b) Review of laws and/or by-laws (as well as taking administrative actions) to eliminate bureaucracy on housing development and approval processes (e.g. accelerated automation of land registry, registration of titles, foreclosure and approvals of building plans by local authorities and NEMA). c) Mobilization of the financial resources of line Ministries with responsibility for providing basic services in slum and informal settlements and local authorities.

Source: GOK, (2007a)

Annex 4 : Housing Sector Incentives already Approved by the Government of Kenya

Incentive	Action point
a) Tax Deductibility for Housing Loans	The interest paid by a person on money borrowed to purchase or improve premises (house) occupied by him is a tax-deductible expenditure against his taxable income up to a maximum of Ksh. 150,000 per annum. However, the money must be borrowed from either: • A bank or a financial institution licensed under the Banking Act • An insurance company licensed under the Insurance Act • A building society registered under the Building Society Act.
b) Contributions to Home Ownership Savings Plan (HOSP)	• A depositor who operates a registered home ownership savings plan is entitled to deduct from his taxable income an equivalent of Ksh. 4,000 per month i.e. maximum of Ksh. 48,000 per annum for a maximum period of ten years. • The income of such Home Ownership Savings Plan is exempt from tax. • The interest income earned by a depositor of HOSP on any deposits up-to a maximum of Ksh. 3 million is tax exempted.
c) Lower taxation of Housing bonds	• The interest income arising from housing bonds is taxed at a final rate of tax of 10%.
d) Prescribed dwelling house	• A prescribed dwelling house is a house constructed for and occupied by employees of a business carried on by the person owning the dwelling house and which conforms with prescribed conditions. • A prescribed dwelling house qualifies as an Industrial Building as defined under the income Tax Act and hence the employer is allowed a deduction against his taxable income at the rate of 1/40 of the capital expenditure per annum 5%. • The purpose of this incentive is to encourage employers to give decent housing to their Employees
e) Tax deductibility for expenditures for social infrastructure	Expenditure of a capital nature incurred by a person on the construction of a public school,

	hospital or any similar kind of social infrastructure and is given prior approval by the Minister for Finance is tax deductible.
f) Tax deductibility of interest from infrastructure and social services bonds	Interest income accruing from all listed bonds used to raise funds for infrastructure and social services is exempt from tax provided that the bonds shall have a maturity of at least three years.
g) Industrial Building Allowance	Give Industrial Building Allowance to persons constructing residential buildings for rental purposes to the low income earners.
h) Exemption of Value Added Tax on goods and services	Zero-rated taxable goods and services supplied to specific projects for the construction of a minimum of 20 units of houses situated in planned development schemes for the benefit of low income earners.
i) Assignment of pension's benefits	Allow Assignment of pensions benefits as security for accessing housing loans subject to the development of appropriate regulations to ensure the spirit of pension benefits is not eroded and also to ensure that not all the pensions benefit amounts used for security for the housing loan.
j) VAT on Rental Buildings	Rental buildings for residential purposes will remain VAT exempt but rental buildings for nonresidential buildings will be removed from the VAT exempt category. In addition small scale landlords will be left out of the tax since the law will only apply to those landlords who earn in excess of Kshs. 5 million per annum in rent.
k) Housing Development Bond	The Government has given approval to the National Housing Corporation to float a Housing Development and Infrastructure Bond in the Nairobi Stock Exchange.

Source: GOK, (2008)

Annex 5 : Models Used in the Empirical Studies

Regression Models

Regression models are used to predict one variable from one or more other variables. Regression models provide a powerful tool, allowing predictions about past, present, or future events to be made with information about past or present events. In housing finance studies the models are used to examine if variables like interest rates, income growth rates and the supply of housing have effects in the determination of private housing prices. They are employed because it is less expensive in terms of time and/or money to collect the information to make the predictions than to collect the information about the event itself, or, more likely, because the event to be predicted will occur in some future time.

Error Correction Vector Autoregressive (ECVAR) Models

Vector Autoregression (VAR) is an econometric model used to capture the evolution and the interdependencies between multiple time series. The model is used for analyzing the interrelation of time series and the dynamic impacts of random disturbances or innovations on the system of variables. In housing finance studies the models are used in modeling the impact of specified macroeconomic variables (e.g. housing loan rates, inflation and employment) on the price of new housing. The VAR approach sidesteps the need for structural modeling by treating every variable as endogenous in the system as a function of the lagged values of all endogenous variables in the system. All the variables in a VAR are treated symmetrically by including for each variable an equation explaining its evolution based on its own lags and the lags of all the other variables in the model.

Variance Decomposition Analysis

Variance decomposition analysis provides information about the dynamic behaviour of the model and the relative importance of each random disturbances or innovation in the VAR. Variance decomposition shows the proportion of the movements in the endogenous variable sequence as a result of its own shocks against shocks to other variables.

Impulse Response Functions

The impulse response functions can be used to produce the time path of the dependent variables in the VAR, to shocks from all the explanatory variables. If the system of equations is stable any shock should decline to zero, an unstable system would produce an explosive time path.

Econometric Models

Econometric models are statistical models used in econometrics. An econometric model specifies the statistical relationship that is believed to hold between the various economic quantities pertaining to a particular economic phenomenon under study. An econometric model can be derived from a deterministic economic model by allowing for uncertainty or from an economic model which itself is stochastic. However, it is also possible to use econometric models that are not tied to any specific economic theory. In housing finance studies the model is used in exploring the relationship between a change in the personal income tax treatment of home ownership and change in house prices.

Econometric Modeling

Econometric Modeling is a forecasting technique that uses computer processed mathematical equations that are based on historical data and certain assumptions to predict economic conditions. These models are employed commonly in determining the economic aspects of changes in government policies, regulatory conditions, interest rates, demographic changes, tax laws, wage levels etc

Pooled Regression

Pooled Regression is usually carried out on Time-Series Cross-Sectional data- data that has observations over time for several different units or 'cross-sections'. In housing finance studies pooled regressions are used for analyzing effects of fiscal instruments on mortgage debt. This approach can be used when the groups to be pooled are relatively similar or homogenous. Level differences can be removed by 'mean-centering' similar to Within-Effects Model data across the groups subtracting the mean or average of each group from observations for the group. The model can be directly run using Ordinary Least Squares on the concatenated groups. If the model yields large standard errors small T-Stats, this could be a warning flag that the groups are not all that homogenous and a more advanced approach like Random Effects Model may be more appropriate.

Monetary Conditions Index (MCI)

In macroeconomics, a Monetary Conditions Index (MCI) is an index number calculated from a linear combination of a small number of economy-wide financial variables deemed relevant for monetary policy. These variables always include a short-run interest rate and an exchange rate.

Micro Simulation Models

Micro Simulation models are computer models that operate at the level of the individual behavioral entity, such as a person, family, or firm. In housing finance studies microsimulation model are used to examine the probable impacts of a Low Income Housing Tax Credit or other fiscal instruments to housing markets. Such models simulate large representative populations of these low-level entities in order to draw conclusions that apply to higher levels of aggregation such as an entire country. This type of model is distinct from aggregate models whose explanatory variables already represent collective properties. An example of such an aggregate explanatory variable might be the national unemployment rate.

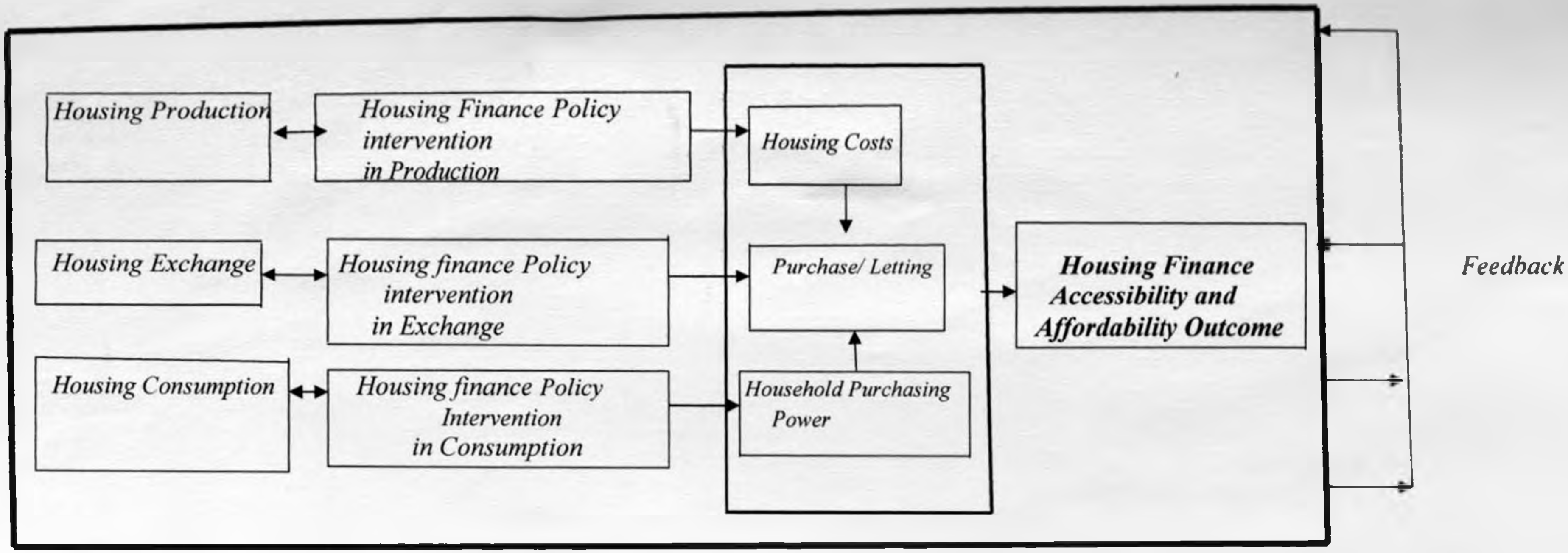
Bayesian Vector Autoregression (VAR)

Bayesian Vector Autoregression (VAR) is an econometric model. In housing finance studies the model is used to examine the role of the housing market and monetary policy in business cycles. Bayesian Vector Autoregression (VAR) is the Bayesian version of simple VAR model. This means that the coefficients are assumed to have a prior distribution. This implies that after applying the data the coefficients will get distribution.

Naturalistic Inquiry

Naturalistic inquiry is a qualitative research method that emphasizes the importance of studying an issue in its natural context using observation, case studies, open-ended interviews, and ethnographic methods. Insights gained through naturalistic studies are then confirmed through member checking, auditing by peers, triangulation, and other methods.

Annex 6 : Conceptual Framework : Housing Finance and Accessibility and Affordability



Source : Researcher's Own Conceptualization