A Framework for Financing Housing Development and Ownership in Africa

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Purpose: There is a need for the modification of mortgage finance to embrace new innovative finance options that will facilitate access to housing by low- and middle-income earners in Africa. Thus, this paper seeks to evaluate the suitability of informal finance options for incremental housing development in Africa.

Design/Methodology: A desktop survey of the literature was carried out to consider mortgage financing in contrast to other housing financing options. The approach was used to critically appraise and consolidate existing studies on innovative financing (informal finance option) in Africa. The Mendeley app was used to collate and organize the literature chronologically spanning 24 years of 1994-2018. Thematic content analysis was used to appraise positions, gaps, and lapses in the implementation of different informal housing financing solutions.

Findings: In most African countries like Kenya, Rwanda, Nigeria, and Malawi, mortgage finance research continues to grow as a major part of affordable housing finance. However, there are considerable interests in innovative affordable housing finance tools and incremental housing for the low-income groups.

Research limitations/implications: This study is limited by the low volume of quantitative literature and data gaps about incremental housing in the African context. However, this motivates the need for a more elaborate exploration of the research and knowledge available.

Practical implications: This study adds to the growing discussion of exploring available research on innovative housing finance in Africa.

Originality/Value of work: To our knowledge, this study provides insight into the opportunities for a diverse pool of formal and informal financing options to build an acceptable house finance framework for the African housing market.

Keywords: Incremental, housing, finance, framework, mortgage, loans, affordability, developing, economies, Africa.

1. INTRODUCTION

For a lot of households, buying a home is a huge capital outlay and mortgage lending is one of the many options for financing the purchase. This role played by mortgage finance translates as an opportunity for prospective homeowners who cannot access a lump sum today. However, in several developed and developing economies, inadequate access to mortgage finance and issues of affordability continue to motivate a need to research other instruments for financing housing (Melzer, & Hayworth, 2018).

With the predicted growth in urban population across developed and developing economies, housing needs are bound to become more urgent and sophisticated. According to the report of the World Bank Group (2015), Africa is urbanizing faster than income is growing and consequently effective demand for housing is low. Consequent to this, financial institutions that provide mortgage financing apply stringent loans criteria, offer high and variable interest rates, and require short repayment periods. This situation makes housing finance through mortgages unattainable for a lot of Africans (Nyasulu, & Cloete, 2007). Furthermore, it creates a situation where most prospective homeowners rely on grants, government subsidies and other informal modes of finance.

One can infer from this that investment in formal housing finance for low-income groups has increasingly become unattractive to investors. The studies of Wallace, (1995); Gurran, & Whitehead, (2011); Poon, & Garratt, (2012); Bright & Demarco (2016); Ryan-Collins, (2019) observed that mortgage finance plays a major role as a contributor to housing affordability in most developed economies. However, this is different in developing countries, especially, across Africa. The challenge of accessing mortgage loans by the low-income class and utilising the same for homeownership has been a herculean task.

For example, in Rwanda, commercial banks dominating the mortgage market provide expensive middle and short-term home loans, conditioned loan to value (LTV) ratio and conditioned payment-to-income ratio from which stem limited housing affordability (Iyandemye & Barayandema, 2018; Fuchs, 2018). What this implies is that only high-income households with collateral assets, and who are capable of shorter repayment periods often qualify for mortgage finance. This is similarly the case as reported in studies undertaken in Ghana, Zimbabwe, Namibia, Ghana, Nigeria, Uganda, and Tanzania (see Quansah & Debrah, 2015, 2004; The World Bank 2011). This is because the low-income earners cannot repay mortgage loans especially the size required for housing. Thus, the objective of providing affordable housing for low-income earners is inhibited in most developing countries.

Therefore, the majority of Africa's housing demand will have to consider less conventional/informal financing options to meet housing needs. To stem the growth of informal settlement and slums, country leaders must explore a variety of financing options for housing modification, development, and incremental housing in Africa. Despite these obvious needs, research into new and innovative finance options have been polarized, disjointed and seemingly incoherent on the informal or incremental housing finance. Thus, the concern on whether informal housing finance can be considered as an alternative, substitute, or complement to mortgage finance in Africa. Several studies on the subject matter have focused on re-inventing or modifying mortgage finance suitable for the African market (see Nyasulu & Cloete, 2007; Melzer, 2015; Akenga, Olang & Galo, 2015; Nyanyuki & Omar, 2016).

The lack of clear consensus on research and innovation aimed to improve mortgage finance across these studies is a matter of concern, hence, the need for this study. The purpose of this study, therefore, was to explore the need for an alternative form of financing housing development and ownership. Thus, the main motivation is to build a financing framework that is suitable for the African housing market.

2. BACKGROUND

Finance plays an important role in housing delivery and provision globally and Africa is not exempted. The housing deficit experienced across sub-Saharan Africa can be linked to various factors including poor access to financing options and an undue focus on mortgage/formal financing. A mortgage is the pledging of property to a creditor as security for the payment. The lender holds the title to the borrower's real estate until the debt is completely paid up (Struyk, et al. 2010). Financial institutions involved in mortgage lending use investors' money to lend to those who want additional funds to finance their house purchases or construction (Nyasulu & Cloete, 2007). Often the lender requires some risk assurance in form of collateral, or they hold on to the deed certificate till loans are fully repaid.

The selection criteria for a mortgage are designed to ensure profitability for the financial institution and lenders. This objective may not particularly be aligned with the affordability agenda of borrowers. This is because the income of the prospective homeowner and other criteria set by the bank is used to assess default risk and ability to repay loans. In a lot of African economies, income levels are too low for most people to be eligible for mortgages. This contributes to the continued growth of the housing deficit (United Nations Human Settlements Programme, 2005).

Therefore, as population and urbanization growths continue unabated, the lack of access to finance by a majority would often grow. Considering the popularity of mortgages in housing finance research, diversifying, and exploring innovations in housing finance would require a clear agenda for inquiry. It is important to consolidate how financing can be done to bridge the gap between the lender and prospective homeowners. As far back as the early 90s, developed economies like the United States have been faced with the challenge of providing affordable housing to low-income groups. Yet, this affordable housing gap has remained unfilled even with the development of mortgage finance (Wallace, 1995; Cacdac & Warnock, 2008).

Table 1: Global Mortgage Finance Products (adapted from Cacdac & Warnock, 2008)

	The average length of the contract (years)	**Estimated Average LTV (%)**	**Average Max LTV (%)**	**Fixed or variable interest (Mode)**
Africa	23	-	90	Variable
Eastern Europe	23	50	85	Variable
Emerging Asia	22	73	84	Variable
Latin America	21	90	83	Variable
Middle East	14	-	80	Variable
Europe	25	74	95	Variable
North America	28	68	98	Fixed
Pacific	27	78	83	Variable

As seen in Table 1, the mortgage finance framework in Africa does not show any significant difference compared to the developed countries. Compared to the Middle East, Eastern Europe, and Emerging Asia, Africa seems to have a mortgage finance system that offers high Loan-to-Value (90%) and a 23-year contract period (provide source). One can infer that the mortgage data collected in Africa is only restricted to a small population of high- and middle-income people. Thus, the information in Table 1 only proves further that deepening mortgage finance or increasing the supply of mortgage finance may not be the solution that Africa needs.

What this means is that households must rely on their savings, family support, and contributions to build their homes incrementally (Groves, 2004). The Centre for Affordable Housing Finance in Africa (CAHF) (2012) opines that the development of appropriate and fully accessible housing finance systems across Africa is challenged by a narrow focus on the mortgage instrument and a failure of housing policy and delivery systems to acknowledge and support the potential of incremental housing. Furthermore, the popular mortgage finance option is often considered expensive for most households to acquire. For example, Quansah, & Debrah, (2015) found that mortgage finance in Ghana is often considered too expensive for most prospective homeowners.

In Malawi, Nyasulu & Cloete (2007) found that the average mortgage payment is about 150% above the average monthly income level. Also, the ratio of average house price to annual income is more than 5 and thus considered to be unaffordable for more than 50% of households living in urban areas. Their study confirms that only about 35% of the population can access formal finance sources, due to low-income levels and a high level of insecure jobs. Therefore, they propose a diversity of financing options including mortgage finance, fully guaranteed loans, payroll-based systems, micro-finance methods, rental, public/private partnerships, and securitisation, to increasing access. Nyasulu & Cloete (2007) confirm that formal housing finance in Malawi is rudimentary and access criteria are often too stringent that it excludes 65 per cent of potential beneficiaries.

Furthermore, a lot of economic policies, and housing finance investment seem to reflect the belief that simply adjusting mortgage finance does not offer a definite solution to this problem of unaffordability. Mortgage finance promises prospective owners an opportunity to spread a bulk purchase over a short or long repayment term. This inherently promises affordability for people who cannot ordinarily commit to a once-off property purchase. However, mortgage finance seems to only serve the high-income population and a limited number of middle-income people (Ayeniyo, 2020; Hawtrey, 2009; Samuel, 2019). An analysis carried out by Nkechi, Samuel & Meshack (2019) reports that commercial bank mortgages had no significant contribution to housing finance in Nigeria with a proportion of less than 1% on a yearly average.

Similarly, Hawtrey (2009) also argues that mortgage finance for developer-built units served only a small upper-middle class. The remaining population appeared marginalized from economic growth and unable to afford commercially produced housing. This is further corroborated by The World Bank (2011) report on Kenya's Mortgage Market. The report stated that an ideal mortgage financing system should have a sufficient absolute level of income, verifiable and regular income but most of Kenya does not have this. Furthermore, for a lot of the cases where mortgage finance has recorded some success, it is with the understanding that this cannot be replicated in developing economies with poverty rates and lower income levels (See Anacker, 2019; Nyasulu & Cloete, 2007; Iyandemye & Barayandema, 2018; Nyanyuki & Omar, 2016).

3. CONTEXTUAL UNDERPINNINGS OF INFORMAL/INCREMENTAL HOUSING FINANCE

Several studies on informal housing allude to the significant advocacy and contribution of John F.C. Turner's theories of incremental housing to this research focus (Ryan-Collins, 2019; Akinwunmi, 2009; Donkor-hyiaman, 2018; Van Noorloos, et al. 2020). Notable among the studies that explored Turner's self-help theories is Van Noorloos, et al. (2020). The study shares an extensive examination of the informal incremental housing system in the context of present-day Africa. It also posits that the relationship between housing consolidation and the management of different types of finance, the role of savings, and the costs of self-help housing has been hardly addressed in research. Their position is that informal housing finance seems less stringent when compared to mortgage finance. This is because this source of funding from friends and family, savings, and community contributions sometimes seem to be the more accessible option. However, because of the nature of these forms of financing, they are inconsistent, piecemeal, and not always available.

Furthermore, Van Noorloos, et al. (2020), discuss housing finance and the need to distinguish between supply-side and demand-side financing when it comes to incremental housing. Based on this, it is important to note that housing finance in the African context needs to be considered from the end-user's perspective. If incremental housing finance must be designed to reach the neediest, it should give cognizance to how Africans incrementally build their homes and as such rely on informal and incremental finance. This perspective draws from John F.C. Turner's theories that advocate assisted self-help housing as the most affordable housing option in developing economies as against the formal options like mortgage finance.

While referencing JFC Turner's self-help theories, Ntema (2011) notes that Mortgage finance adopted from developed economies forces the purchase of ready-developed housing. This contributes significantly to the problem of affordability. Therefore, this study proposes an affordable housing finance framework that is more suitable to the economic realities of Africans and the need to build incrementally. The framework is expected to closely align financing of a home purchase or ownership with the socioeconomic status of African households. In most African settings, households develop or own their houses in bits or incrementally such that at year 0, the land is acquired, and development might take several years. The time taken to gather the required equity or debt finance for acquisition may have taken several months or years by household. In countries like Nigeria, for instance, low-income home buyers or developers relied on pooling of resources together from friends, relatives, or work colleagues to raise funds. Others look to workplace cooperative society for raising required finance with limited repayment period.

Thus, the proposed house financing framework must incorporate the income source and level, family size to determine the appropriate type of accommodation for household, cheaper building materials and length of repayment among others.

4. LITERATURE REVIEW

This section reviews related literature on housing finance affordability as it concerns the incremental housing finance system. Among various studies that have considered the subject of affordable housing in Africa, Groves (2004) makes one of the earliest cross-continental contributions. His study investigated the challenges facing the provision of affordable housing in African cities. He pointed out that privatised African housing markets are often small-scale and largely financed by building societies – a reminder of colonial pasts. Financing in these times struggled because of poor macroeconomic conditions and Structural Adjustment Programs that withdrew government funding, tax, and regulatory privileges. It can be inferred that finance failure is partly influenced by the apathy or lack of government role in developing scalable markets.

Similarly, several studies have blamed the failure of formal housing finance in Africa on neoliberal market systems (Goebel, 2007; United Nations Human Settlements Programme, 2005; Ferguson & Smets, 2010). These studies believe that liberalizing the market would only seem to absolve the government of its responsibility towards housing the poor. However, in the journey towards innovative finance for incremental housing, enabling markets can be seen from a different and more positive perspective.

Groves (2004) recommends government subsidies and aid that augment savings, credit co-operatives, employee savings schemes and other traditional forms of rotatory credit associations. Meanwhile, they note that any innovation in finance would not be sustainable without tenure security. This suggests that the author believes that lack of government involvement and insecure land tenure is the biggest bottlenecks to financing affordable housing for low-income groups. The study suggests that an appropriate way forward would include liberalising land supply through market forces and development and financing for the middle-income groups. Their study assumes that a liberal market would be accommodating to the needs of many Africans and contradicts its position that government involvement is required to strengthen the market.

Furthermore, the question of risk and how it is shared among the stakeholders to housing development is critical to financing. In addressing risk and transaction cost, Ferguson & Smets (2010) believe that every finance framework must include a legal aspect; user credit information, trust, or collateral; and it must redefine the role of government. In a study of Botswana's housing finance system, Berge & Jing (2010) discovered a small housing finance market dominated by commercial banks. Despite the gains of a stable macroeconomy, they noted a lack of competition, focus on high-income groups, inexistent secondary market, and hesitation to lend to other low-income groups. Berge, & Jing (2010) believe that unlike many other developing countries in Africa, Botswana's stable macroeconomic development since the 1980s and 1990s has ensured that housing finance is unhindered. However, despite the shift in the structure of bank lending to households, with property loans increasing rapidly between 2002 and 2006, still development remains slow. In their consideration of the development of housing finance in Botswana, they attributed the lack of scale to a large population that are considered low-income and risky subsequently excluding most of the financing of the poor household.

In discussing housing finance, Tomlinson (2007) and Berge & Jing (2010) refer to the framework developed by Hassler (2005). In this framework, 5 preconditions for a workable housing finance market are identified. The framework adopted often builds on stable macroeconomic conditions, a legal framework for property rights, a functioning property market, mortgage market infrastructure and funding mechanisms. However, when working with this framework, several studies ignored the macroeconomic differences between developed and developing economies. Thus, it is necessary to align the framework to the African market incorporating other mechanisms that have been used among Africans to raise funding for their other needs. What this creates is a bleak legal and macroeconomic and higher risk perception by lenders operating in emerging African economies, (see Datta & Jones, 2001; Cacdac, & Warnock, 2008; Hawtrey, 2009).

According to Berge & Jing (2010), besides locational, urbanization, and legal framework challenges to financing housing, a lot of low-income applicants for financing are challenged with exclusionary selection criteria. This belief or lack of faith in the profitability of lending to low-income homeowners can be attributed to several indicators including macroeconomic perception. The formal finance selection criteria are often designed to protect lenders and investors from the risk and volatility inherent in developing markets. This is not unreasonable as the purpose of investment is largely profitability. However, it becomes imperative to consider hybrid frameworks that improve risk management practices while giving investors more confidence to diversify financing products that extend to the low- and middle-income groups.

Assisting people who are already used to building incrementally in terms of finance could mean a lot of things to financiers, the government, and even the homeowners. Habitat For Humanity (2014) advocates the provision of Housing Microfinance to assist this incremental or progressive mode of housing development that accounts for up to 90 per cent of residential construction in the developing world. Developing a framework for assisted incremental or self-help housing as a paradigm could be a way forward for creating enabling markets for innovative financing options for low- and middle-income groups across Africa.

While some studies see enabling housing markets and self-help as an ideal pathway for achieving housing finance affordability others see this as a mere abandonment of government duties and a detrimental result of neoliberal economic policies. For example, Hawtrey (2009) reports that For the World Bank, enabling housing markets mainly meant virtually abandoning sites-and-services and slum-upgrading projects for two decades in favour of funding national mortgage systems with loan terms of typically 20 to 30 years for the middle and upper-middle classes. Similarly, Kongoro & Owino (2016) claim that incremental housing, despite its popularity, is not the solution to the low access to housing finance in Kenya. In the face of a staggering failure of formal/mortgage finance across African economies, and unique macroeconomic realities, housing finance frameworks must be duly situated in the African context.

This study hopes to consolidate knowledge on innovative and inclusive approaches to financing and enabling affordable housing for low-income groups in Africa. It proposes a new financial framework that reimagines the role of government as a market enabler and risk buffer that would improve private investor confidence.

5. METHODOLOGY

Further to developing a finance framework for African housing markets, a thematic content analysis approach is employed. This study critically appraises and consolidate existing studies on innovative financing in Africa. It identifies 18 studies that discussed the enabling market and incremental housing model as part of the affordable housing research focus. The literature selection focuses on developing economies especially those that include a mix of qualitative and quantitative data from African countries and some in comparison with more developed economies. The literature was selected from Google Scholar top results for searches relevant to keywords like mortgage, housing finance, and affordability in developing economies. Mendeley app was used to collate and organize the literature chronologically while selecting top results focused on African markets. The literature spans 24 years from 1994-2018.

The 5 preconditions as explained by Berge & Jing (2010) include stable macroeconomic conditions, a legal framework for property rights, a property market, mortgage market infrastructure and funding sources to promote financial intermediation. By inspecting literature, this study expands on data points that can be used to consolidate the housing finance framework in operation in some African countries. This would then provide the basis for recommending and designing a new framework that is representative.

The content analysis method adopted is a tabulated critical assessment of literature. It seeks to summarize key findings on the suitability, adoption, and capacity of other innovative housing finance solutions other than mortgage financing within the African affordable housing context. This literature review employs a critical content review that hopes to determine if research and inquiry paradigms are giving sufficient focus to the incremental housing finance needs across Africa.

The study does not assume that all literature on housing finance in Africa can be examined. So the selection is limited to literature that specifically focuses on innovation and the incremental housing finance sector in Africa. However, this critical review and content analysis select some of the most relevant empirical, quantitative, and qualitative literature available across various African economies. This seeks to consolidate the extant knowledge and developments in the affordable housing finance discourse.

6. RESULTS AND DISCUSSION

This section contains an analysis and discussion of the results. The analysis was done in three subsections including the results from previous studies on challenges of mortgage financing systems in Africa, incremental housing finance and finally the framework for the adoption of incremental housing financing for the African market.

6.1 Challenge of mortgage financing system in Africa

In discussing the challenges to the development of mortgage financing systems in Africa, several factors have been considered overtime. Popular among these challenges are weak or lacking secondary markets to ensure liquidity and long-term funding, low-income levels across most developing economies, an unstable macro economy that informs high inflation and interest rates, poor legislation/regulation that enforces foreclosure, weak land titling systems and poor tenures, almost non-existent credit information, and financial illiteracy or cultural issues like an aversion to credit (Donkor-hyiaman, 2018).

Table 2: Challenges of Mortgage Financing in Kenya, Ghana, Rwanda, and Botswana

Author							
	Weak Secondary mortgage market	**Low-Income levels**	**Unstable Macroeconomy**	**Lack of credit history**	**Poor regulation and collateral**	**Financial illiteracy**	**Lack of tenure security**
Teye, Teye & Asiedu (2013)	√	√	√	√	√	√	√
The World Bank. (2011)	√	√	√	√	√	√	√
Samuel (2019)	√	√	√				
Berge & Jing (2010)	√	√	√		√	√	√

6.2 Incremental housing finance in Africa

The challenges of mortgage financing do not completely rule out the existence of housing markets and financing in Africa. Across the continent, homeowners have gone on to build incrementally. This necessitates the development of a framework that is suited to the financing needs of these incremental housing processes. Informal markets do not have to lack structure. Hence this study inspects the nature and operation of incremental or informal housing systems across Africa to developing a housing finance framework.

Building on existing frameworks like the International Finance Corporation (2019), and the Hassler (2005) housing finance framework, the study examined 7 African housing markets. The indicators inspected in Table 3 depicts the housing finance strategies adapted in housing markets that seek to address the need for incremental/informal housing finance options. The study captures differing but similar strategies for improving access to housing finance in Kenya, Nigeria, South Africa, Botswana, Namibia, Egypt, and Morocco. The frameworks address tenure security, diversity of funding sources, collateral or loan security, government's role, and loan terms, differently. However, some common themes can be established and applied for developing an African housing finance framework that accommodates informal and incremental housing needs.

Table 3: Incremental housing finance frameworks in Africa

Incremental Housing Finance in Africa							
	Kenya	Nigeria	South Africa	Botswana	Namibia	Egypt	Morocco
Land Tenure							
Opportunity to Regularize Tenure	√	√	In progress	-	√	X	√
Funding Sources							
Housing Microfinance (HMF) Providers	13	1 013	4 500	12	423	969	12
Govt. & DFI Subsidies	√	√	√	√	-	√	√
Savings/Deposits Coops	√	-	-	315	√	-	-
Repayment guarantee?							
Pension fund Guarantee	√	-	-	X	√	-	-
Community Guarantee							
Government Guaranteed loan	√	√	-	√	-	√	√
Savings history	√	√	-	-	-	-	-
Employment history		√	-	-	-	-	-
Government Role							
Interest rate subsidy	√	√	-	X	√	√	√
Cash Grants	√	-	√	√	√	√	√
Tax Incentives	√	-	-	-	-	-	√
Loan Terms							
LTV %	-	90-100		100	100+	-	-
Repayment Period (yrs.)	Variable	30	20	20	25	20	25
Repayment Schedule	-	Monthly	Monthly	-	-	-	-
Interest	18	6	25	17-24	8.75	10	4.45

Sorces: (Groves, 2004; Hassler, 2005, Gardner, 2008; International Finance Corporation, 2019; Centre for Affordable Housing Finance in Africa, 2020)

6.2.1 Tenure Security

Kenya, Nigeria, Namibia, and Morocco demonstrate the strong pursuit of integrating informal settlements through tenure regularization. While South Africa pursuing legislative reforms for the Upgrading of Land Tenure Rights targeted at excluded or discriminated groups (Centre for Affordable Housing Finance in Africa, 2020). Despite Egypt's strong housing finance efforts, the demolition of informal settlements is bound to discourage support for incremental or informal housing efforts. This consequently increases the issues of unaffordable housing for informal housing. Tenure security is a major determinant for building investor’s confidence and creating avenues to regularize informal settlements is bound to increase housing finance supply. The United Nations Human Settlements Programme has committed to improving the lives of 100 million slum dwellers by 2020 through tenure security action plans (Groves, 2004). African housing markets would benefit immensely from frameworks designed to extend tenure security to informal settlement dwellers.

6.2.2 Diversity in Financing

The need to combine various financing sources for incremental housing is an African reality. In Table 2, the responses of various African countries to this need provides interesting insights. Nigeria and South Africa have the largest pool of Microfinance providers with 1 013, and 4 500 respectively. Gardner (2008) reports that between 10% and 33% of all microfinances in South Africa is applied to housing in some way, which implies a housing-related microfinance portfolio up to R10.7-billion (about US$1.1 billion). The Nigerian situation can be assumed to be similar to Habitat for Humanity (2014) suggest that 20% of microenterprise lending is used for housing in developing economies. There is also a huge reliance on government and DFI subsidized loans which is indicative of the slow adoption of the government's role as an enabler instead of the provider. However, in Botswana, Kenya, and Namibia, the growth of Savings cooperatives is a great financing initiative that should be given more attention as a source of financing. Encouraging deposits and savings to pool funding is bound to create a sustainable way to promote savings culture while offering a chance for longer-term and large-scale finance for incremental housing.

6.2.3 Loan Repayment Guarantee

Understanding the challenges with tenure security and lack of collateral in a lot of incremental housing systems, lenders and investors confidence would rely on other forms of guarantees. Government guaranteed loans are popular across 5 countries of the 7 in Table 2. A few other approaches for securing loans that have been recorded include pension-fund guaranteed loans and the use of savings history as a basis for extending housing finance. In Nigeria, the Federal Mortgage Bank uses worker's contributions to the National Housing Fund as eligibility criteria for subsidized housing loans. Furthermore, the employment of the Bank Verification Number (BVN) technology in Nigeria to guarantee repayments stands out as an innovative tool (Centre for Affordable Housing Finance in Africa, 2020).

6.2.4 Government Role

Shifting from affordable housing provider to enabler means a lot of things for various markets. In Africa, cash grants to the affordable housing market are still popular instruments employed. Only Nigeria does not have any direct cash transfer model for supporting the purchase or ownership of affordable housing. Interest rate subsidies are also relatively popular in Kenya, Nigeria, Namibia, Egypt, and Morocco. Meanwhile, tax relief and concessions to developers are also seen in Kenya and Morocco. It is still a popular experience to have the government acting as providers of housing finance instead of acting solely as market enablers.

6.2.5 Loan Terms and Affordability

Information on loan terms for the informal sector is not constant or readily available. However, it is common to find 100% LTV instruments that seek to reduce the risk of loans for the recipients. However, this means that credit risk is often a burden on lenders must bear. Sharing credit risk through equity is not as popular as it should be. Interest rates are not constant, and this is indicative of varying risk perceptions across Africa. Morocco's low interest is attributed to a stable macroeconomy, and government-guaranteed loan system known as FORGARIM (Centre for Affordable Housing Finance in Africa, 2012). It can be inferred that housing finance frameworks that share the risk burden among stakeholders have greater chances of improving affordability.

6.3 Framework for the Adoption of Incremental Housing Financing For the African Market

Seeing the unique challenges of operating formal mortgage finance in most African countries, this study proposes a diverse framework to create a pool of informal financing solutions that achieve inclusive financing for low- and middle-income earners. The framework proposed reflects some of the strategies employed in African markets that have achieved limited success in addressing incremental housing needs. The study recommends a hybrid framework that relies and builds on the 5 preconditions for housing finance frameworks by Hassler (2005). The Assisted/Government Guaranteed Incremental Housing Finance Loan framework is illustrated in Figure 1.

Based on the framework developed, here are recommendations for achieving incremental housing finance frameworks in African markets:

1. Tenure security plays a huge role in the risk perception of informal settlements in African countries. An opportunity to regularize tenure would significantly improve opportunities for informal homeowners to be integrated into a deed's registry, giving them collateral. This
2. Prioritize data and research that focuses on innovation for financing incremental housing. Increasing credit information is critical to investor confidence. In place of a credit registry, African economies will benefit from identification systems that provide sufficient information on savings history, employment history. This should also offer information sharing as a benefit to housing microfinance lenders and credit bureaus that can centralize information for monitoring repayment capacity and behaviour. Donkor-hyiaman (2018) has discussed the importance of credit information in detail.

In Nigeria, the Bank Verification Number (BVN) is employed as an alternative to credit information availability and gives access to customer data (Centre for Affordable Housing Finance in Africa, 2020).

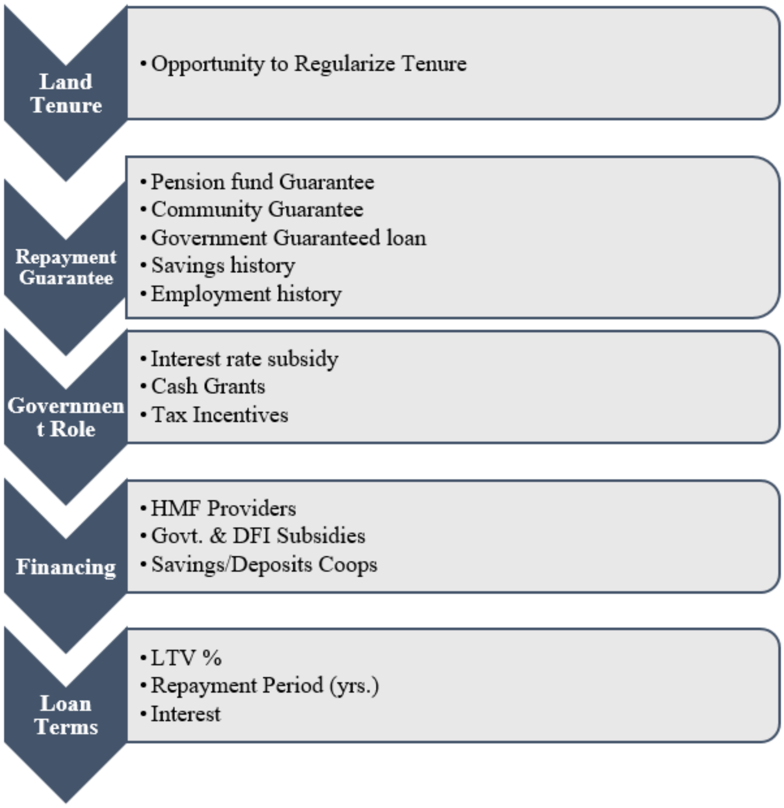

Figure 1: Assisted/Government Guaranteed Incremental Housing Finance Loan

3. Identify other finance options like pension-backed housing loans, government-assisted self-help in South Africa, and shelter microfinance in Kenya. The World Bank (2011) on developing Kenya's mortgage market discusses the use of pension as collateral. The program uses up to 60 per cent of a pensioner's accumulated pension savings as collateral guaranteeing a housing loan. This application of pension savings as collateral is widely recommended (Akenga, Olang & Galo, 2015; Berge & Jing, 2010). Other guarantee systems like community guarantees and government-guaranteed loans offer a greater risk management opportunity that will improve investor confidence.
4. Consistent measures of affordability should be defined for markets across Africa. The measures of affordability like debt-to-income percentage, repayment period, and lending rate provide inconsistent results indicating a huge data gap. This further increases the difficulty that is inherent in acquiring relevant information about how Africans meet their housing needs. With the growth of liquidity through pension funds or savings cooperatives, for example, longer-term financing can be offered for incremental housing. The repayment terms are often more affordable where the funding supply is greater.

5. A lack of stable cost of financing (interest rates) is reflective of a vast, diverse, and almost incomparable financing experience for most of Africa's developing economies. This could be a result of the volatility and uncertainty that characterises such economies. The role of government in creating enabling macroeconomic conditions cannot be overemphasized. The provision of interest rate subsidies would allow lenders to provide affordable financing while maintaining profitability.
6. Diversifying financing products as seen in Morocco and Botswana, which are notably the most robust and diversified affordable housing markets in Africa, provide incentives for finance innovation. The two economies have evidence of innovative finance models extending beyond formal mortgage finance (Centre for Affordable Housing Finance in Africa, 2012). Kenya also has records of limited efforts to diversify housing finance products to include building society loans, but the market is dominantly financed through mortgages (The World Bank, 2011).
7. In South Africa, a predominantly state-funded approach has left a huge affordability gap to consider. The data on affordability for South Africa was difficult to assess as homeowners are not fully committed to participating in the finance process. The state-funded housing approach leaves no incentive for homeowners to invest in repayments of financing their homes. Transitioning from a state-funded approach to build a framework for self-help is critical for sustainability across Africa.

7. RECOMMENDATIONS AND CONCLUSION

This study examined the literature on incremental housing finance and other innovative housing finance options to develop an African housing finance framework. Housing affordability in emerging markets is a critical discourse as it has an impact on the quality of life, access to assets, financing, and several other positives for low-income groups. Several approaches have been employed, particularly in developing countries, to provide housing that low-income groups can afford. This is typically in response to the observed growth of rural-urban migration, squatter settlement developments, and the general need to provide habitable shelter for a fast-growing urban population.

The approach to enabling markets and informal housing finance in Africa needs a drastic shift in focus. The over-reliance on the adaptation of mortgage as a possible approach to enabling the market leaves a huge information gap surrounding other unconventional finance approaches like housing microfinance, community financing and pension-backed/guaranteed loans. Furthermore, this gap is bound to increase the resistance of formal housing finance companies to design financing products for incremental or self-help housing. It is recommended that research focus on enabling African affordable housing markets to begin to look outside mortgage expansion and more closely into informal finance solutions.

This agrees with the UN-Habitat (2005) study that confirms a global interest in the development of microfinance institutions lending to low-income shelter development projects. There is a need for research focus to move away from setting the conversation around affordability as it relates to access to formal finance and rather to informal incremental housing. Furthermore, this approach does not allow for an understanding of the unique macroeconomy of informal markets as a tool for innovation. Instead of seeing informality as a threat, there is a need to understand how innovative financing could be designed to handle the uncertainty and risk perception of African markets.

There is a need to set out a clear, comprehensive, and robust research agenda for understanding the financial needs of self-help housing, both in respect of affordability and product design. The strengths of non-conventional finance in meeting the needs of low-income groups, inform the potential for rotating savings, credit associations, and financial cooperatives. Therefore, research and policy that strengthen the understanding of these informal finance tools could change the risk perception of African informal markets. This could, consequently, improve the interest of lenders and financiers in investment for assisted self-help housing finance. More so, growth in the knowledge around cooperatives, housing microfinance, and other informal housing finance tools that are incremental and less stringent than mortgage finance, is beneficial. Within unconventional frameworks, the security of the loan can be handled differently. The lender's risk should be reduced by combining small advances with short repayment periods and diversifying finance sources.

The role of government as an enabler should be channelled at risk management practices like providing loan guarantees that would improve investor confidence. Tax incentives and concessions for developers, savings cooperatives and pooling funds from the private sector would position the government as a strong housing market enabler. It is recommended that housing finance research should embrace the enabling market paradigm in the unique context of informal macro economies that dominate Africa. Therefore, housing finance innovation can significantly benefit policy designs that accommodate the unique macroeconomic context of developing markets and their affordable housing needs.

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