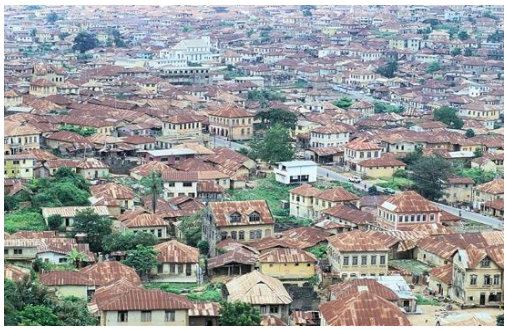
Stocktaking of the Housing Sector in Sub-Saharan Africa
Part I: Regional Report



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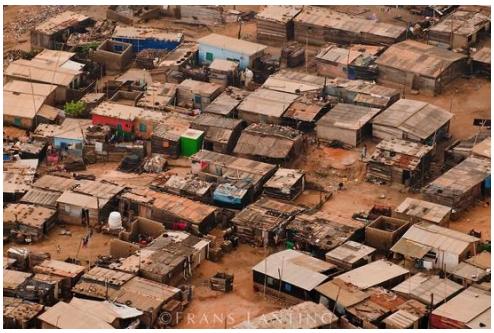


Table of Contents

List of Figures

List of Tables

Appendix

1. Executive Summary

The Regional Report is one of a four-part series on Stocktaking of the Housing Sector in Sub-Saharan Africa (SSA) that includes in-depth country case studies for Nigeria, Ethiopia, and Cameroon. As a stocktaking exercise, this report intends to take critical step towards understanding the SSA housing sector through a descriptive approach illuminating the current state-of-affairs of housing markets and policies and identifying overall key trends in the region.

Most elements of the housing sector in Sub-Saharan Africa are dominated by informality. For the majority of urban residents, housing construction, finance and ownership function largely through informal channels. While urbanization in Sub-Saharan Africa (SSA) is increasing, per-capita incomes in cities are among the lowest in any region. Due to this, the rate of investment in the formal built environment (both private property and public infrastructure) lags behind the rate of population and economic growth. Currently this lag is self-reinforcing – lack of investment yields lack of supply and lack of data, which inhibits investment. Sound policy interventions will focus on improving the functionality of both supply-side and demand-side value chains in both the formal and informal arenas, and driving improvements in institutional capacity both in government and within the capital markets that touch housing.

A. Urbanization and Affordable Housing

Sub-Saharan Africa will lead the world in urban growth. Africa is the globe's least-urbanized continent, and the Sub-Saharan region is the continent's least-urbanized area. Nonetheless, the region's cities are growing and expanding; the United Nations predicts that Africa will overtake Asia as the world's most rapidly urbanizing region by 2025 (UN 2014). Rapid urbanization, driven both by immigration and by natural population growth within the cities, will continue to be the key demographic force. In the next 20 years, the total population of the continent will exceed the combined populations of Europe and the Americas. By 2050, Nigeria alone will contribute nearly 10 percent of the world's total population growth. People move to cities in order to improve their lives and those of their families because of the economic opportunities they provide relative to rural areas.

Future urbanization poses unique and urgent challenges for the provision of adequate housing. Access to a diverse, quality and affordable housing stock will set a foundation for inclusive growth in rapidly urbanizing cities. Urbanization also disrupts the supply and demand for housing; as rural residents leave behind self-built, informal homes and migrate to cities in search of a better life and future, they find that they cannot build or afford urban housing.[1] There is a spatial mismatch in which the concentration of population and employment exists within the city, but the supply of affordable homes remains outside of the city. Further, housing costs in the city rise just as fast, if not faster, than the average incomes in cities. Peri-urban areas are becoming quickly populated and over-settled, even though cities often lack capacity to extend roads, water and sewer pipes, and electrical grids into the new residential ring. Private markets for the allocation of housing move faster than government, and informal private markets move even faster than formal ones, though they do not necessarily guarantee affordability or unit quality.

[1] *An Overview of Urbanization, Internal Migration, Population Distribution and Development in the World.* (United Nations Population Division, January 2008), http://sustainabledevelopment.un.org/content/documents/2529P01_UNPopDiv.pdf.

As urbanization blazes forward, however, investment in formal housing is failing to keep up. Urban growth is being led by poor people who have very limited cash assets or formal income. Governments may either ignore or fail to plan to accommodate new urban growth. The capital investment needed to handle rapid urbanization happens later than it should. Evidence of this is the lack of formal investment in housing across the region. Dasgupta et al. (2014) have found that in Africa, housing investment lags urbanization by nine years. The majority of housing investment in most African countries comes from government debt or domestic savings rather than from international capital markets as is the case in developed economies. As a result, a deficit of quality housing is common throughout SSA, regardless of country income level. For example, Angola (upper middle income) has a housing deficiency of 2 million units while in Kenya (low income) demand exceeds supply by 150,000 units each year (CAHF 2013).

Complementary investments in infrastructure that support housing delivery systems are also lacking. Even though housing investment is gaining momentum, with the median African country investing 5.5 percent of its GDP into housing since the 1990s, it is imperative, as referenced in Dasgupta et al. (2014), that investments be made early, often, and consistently, in (a) basic services and infrastructure, and (b) the institutions that support capital markets. Particular emphasis should be on motivating supply and demand to move down-pyramid, rather than inflating the price of high-income high-priced housing and unintentionally widening income and spatial inequality. The informal built environment that emerges out of low-cost, low-skill, self-built structures is invariably under-serviced by infrastructure and normally overloads existing grids or networks. The high cost to upgrade and expand these links after development has occurred widens the disparity in access to quality housing.

The scarcity of infrastructure and the lack of a quality housing stock reduces the affordability of adequate housing for the urban poor. For policymakers, 'affordable housing' means market-quality formal housing that can be consumed by those unable to afford the typical market price.[2] In any urban market, the market price of a typical home is set by the median household's ability to pay; and the market quality of that home is set by technological and construction factors. Both the price and quality are dynamic: market price goes up as land values rise and location amenities emerge; market-standard quality rises because building materials and in-home utilities become better and less expensive.[3] It is difficult to estimate the population in need of affordable housing due to both data constraints. It is clear, however, that constraints to the housing production and consumption systems, particularly access to land, infrastructure, construction materials and access to consumer finance reduce the provision of affordable units.

Governments have a strong role to play in ensuring housing affordability. The key challenges for supporting affordability is to lower the costs of inputs for housing across the entire sector, while at the same time expanding access to different types of credit needed for the sector, including commercial

[2] Both 'affordability' and 'housing' are relative measures: affordability by its very nature is a household-specific definition based on the ability to pay; and what constitutes housing represents a spectrum of shelter types and qualities that vary between urban and rural environments. In rural Sub-Saharan Africa, homes have limited exchange value because occupiable land is effectively free, materials are grown, dug, scavenged or self-made, and the home is self-built and self-improved. On the other hand, in urban environments, land is scarce and occupancy rights cost money, materials typically need to be purchased, and the need for higher-density (vertical) housing increases construction costs.

[3] Over time however, a housing unit's market value depreciates and will normally drift slowly down below-market unless and until it is renovated or replaced. These dynamics collectively mean that for governments, ensuring housing affordability is a chronic challenge, as the market's expectations and costs are continuously rising, which can place housing out of the reach of low-income households that lack access to consumer finance and have other competing expenditure priorities (Lozano-Gracia and Young 2013).

mortgages, developer and secondary finance. Informal housing delivery channels will require incremental and parallel improvements in expanding access to savings, small loans and construction materials. Supporting institutional and regulatory frameworks must also evolve to ensure that construction and development standards provide a level of safety and security but are not so restrictive or costly that they are ignored. Governments have a role in enabling housing markets and engaging the private sector to expand access to adequate shelter and to be a vehicle for economic growth. This report will detail the main challenges that inhibit housing affordability from both the supply and demand sides and provide recommendations on how governments can enable housing markets to overcome these barriers.

B. The Policy Challenge: Strengthening Housing Value Chains

This report uses an analytical framework that assesses supply and demand side value chains for housing delivery. This method posits that affordable housing, as defined and pursued by governments around the world, can be produced at scale only if the respective value chains work and are effective. Key findings consistent with experience across the SSA region suggest:

1. *Sub-Saharan Africa suffers from a lack of adequate, affordable housing*.

2. *The majority of households in SSA cannot access formal housing due to income constraints*
    a. The cost of formal housing is much higher than the average household's ability to pay. [4]
    b. Self-built informal dwellings constitute the main housing supply of SSA cities.
    c. Rental or rent-free arrangements are an important affordable tenure option, particularly in the context of self-build housing.
3. *Government subsidies for producers and consumers fail to effectively address the need for affordable housing*
    a. Governments often lack the experience and resources to directly deliver affordable housing at scale.
    b. Private developers rarely participate in affordable housing delivery due to finance and capacity constraints.
    c. Government subsidies are not well placed to effectively address the need for affordable housing and fail to engage the private sector as a partner in delivery.

Supply constraints raise housing prices

4. *Land administration systems provide limited support for investment and market exchange*
    a. A plurality of tenure and governance systems impedes the growth of formal land markets and housing finance.
    b. The relationship between common and customary land law is ambiguous in many countries.
    c. Governments struggle to establish consolidated, efficient land recording and regulatory systems, though promising reforms have been made in recent years.
    d. These factors reduce the supply and circulation of land for development.

5. *Infrastructure provision is scarce and lags behind housing development*
    a. Infrastructure coverage across SSA is lower than other regions.

[4] For example: Out of 34 SSA countries, only six (Mauritius, South Africa, Namibia, Swaziland, Lesotho and Mali) have a GNI per capita higher than or on par with the least expensive formal dwelling.

b. Priority investments in infrastructure are directed toward middle- and upper-income groups rather than the urban poor.
c. Unlike developed nations that can tap municipal finance for infrastructure investment, SSA sub-sovereign entities (cities) have minimal access to capital-markets and few tools to capture or tax land values.

6. *The cost of formal construction is high relative to household incomes* owing to building materials, labor shortages, and building regulations.
    a. The cost of formal building materials is high relative to household incomes and are often not locally produced.
    b. There is shortage of formally qualified construction firms and tradespeople.
    c. Building regulations and density requirements can increase the cost of formal housing. For example: Strict density regulations, particularly in city centers, can result in large welfare costs of 3-6 percent or more of average household consumption due to longer commute times and energy waste.[5]

Demand for housing is tempered by the lack of affordable financing options

7. *Most of the SSA population cannot access formal housing finance*
    a. Overall financial access in SSA is low, and most financial activity occurs outside of formal institutions.
    b. SSA's mortgage sector is underdeveloped and activity is concentrated in a small high-income market segment.
    c. Lower-income households' informal income is normally transacted in cash and hence invisible to formal-banking underwriting.

8. *Housing microfinance is a promising avenue for improving affordability because it is suited for informal housing consumption*
    a. The microfinance sector in SSA is well-established.
    b. Middle- and some low-income groups are able to access credit through microfinance institutions (MFIs) and savings groups
    c. The housing microfinance sector is small but growing, and MFIs show interest in housing microfinance, though capacity issues and the lack of long term finance restricts the development of new loan products.

9. *Remittances could have a substantial impact on housing by enhancing household budgets*
    a. SSA receives some US$40 billion from both international (foreign-to-domestic) and intra-national (urban-to-rural) remittances, much of which goes to household expenditures.
    b. Additional research is needed to provide a more coherent policy direction for leveraging remittances in the housing sector.

[5] Robert M. Buckley and Jerry Kalarickal, "Shelter Strategies for the Urban Poor: Idiosyncratic and Successful, but Hardly Mysterious," (World Bank, 2004).

2. Overview: Urbanization and the Housing Sector

A. Background and Justification

Taking stock of the housing sector is a clear and urgent priority in Sub-Saharan Africa. There is a systematic mismatch between demand and supply of affordable housing in Sub-Saharan Africa. This report addresses these issues by enhancing evidence-based knowledge of the housing sector and expanding understanding of the relative importance of determinants for supply and demand of affordable housing in Sub-Saharan Africa. It seeks to address the knowledge gap on what influences housing supply and demand in Sub-Saharan Africa, and to provide a foundation for policy decisions, both at the country level and at a broader regional level. By capturing the key challenges of the region's housing delivery system along the supply and demand-side value chains,[6] this report allows for national governments and the World Bank to make better policy decisions that impact the functioning of the entire housing sector from both the supply and demand sides, rather than aiming interventions at disparate parts of a whole.

This report reviews current secondary sources to provide an overview of the main trends related to housing affordability in SSA. Insights on the macro-regional context were combined with per-country findings, both from the literature and from the companion case studies to this report (Ethiopia, Cameroon, and Nigeria). Observations were organized along the supply and demand value chain framework, then extrapolated into key trends covering government policy and supply and demand challenges for the sector from which the report develops general policy principles. A team of specialists with extensive experience with housing and development in Africa was involved in data collection, content generation and analysis, and commentary for this report. This regional report draws on data from the three country case studies and extrapolates these findings where the country reports showed strong consensus and where that consensus also matched with similar trends observed in other relevant Sub-Saharan African countries.

There are also region-wide overarching trends that create impediments to a fully functional housing sector. Although the African housing sector is highly heterogeneous and there are substantial differences in housing stocks, supply, and access to housing finance between countries, there are some consistent patterns. These trends include: (1) limited availability of affordable housing and largely ineffective public housing schemes; (2) limited access to housing finance; (3) complex land markets; (4) large informal markets; (5) a disconnect between spatial planning in urban areas and housing policy; and (6) tension between policies targeted at various income levels, especially middle- and lower-income groups. The report provides an overview of the main trends that are recurrent in both the three case studies as a well as documented in the literature on other countries in the region.

All of these findings, which are amply supported by the data and discussed in more detail in the discussion of supply and demand side issues are themselves symptomatic of the deeper challenges: value chains that function poorly because they have not been the focus either of appropriate study or of targeted government actions to address market gaps and correct market failures. Hence, the housing delivery and finance processes were carefully mapped across both the formal and informal domains for each of the three case study countries of Nigeria, Cameroon and Ethiopia.

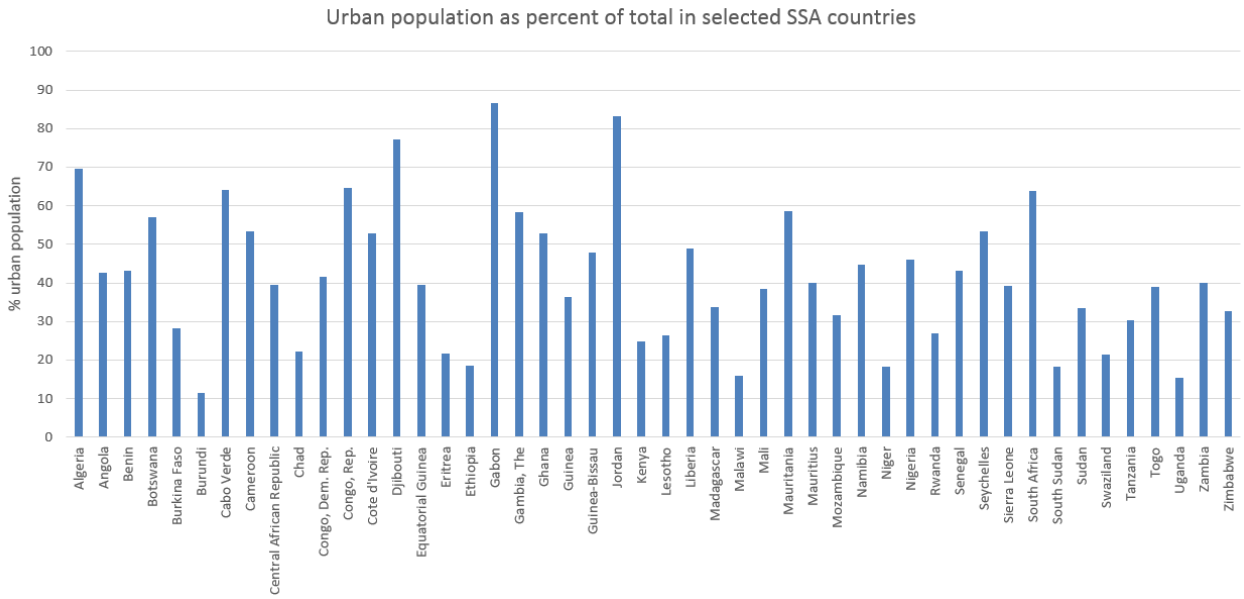
[6] An overview of the main challenges along each step of the supply and demand value chains is provided in *Appendix 2. Overview of Challenges along Supply and Demand Value Chains.*

The report proceeds by reviewing the importance of housing as a vehicle for economic growth and urban inclusion and then outlines the data collection method and analytical framework the study employs. The findings of the report are divided into supply and demand side factors that raise the overall cost of housing and which also encourage the informal provision of housing.[7] A concluding section reviews the main findings and the final section develops a broad strategy for SSA countries to improve the quality and affordability the housing sector as a whole, including both formal and informal channels.[8]

B. Toward the Twin Goals: The Importance of Housing for Inclusive Growth

Africa, like other regions, will have an urban population majority. According to the United Nations, nearly all urban population growth through 2050 will take place in developing countries (UN 2012). Africa is no exception and its total share of the world's urban population will nearly double from 11.3 percent in 2010 to 20.2 percent in 2050. Currently, one fourth of the world's 100 fastest growing cities are in Africa, where there are now 52 cities with greater than one million residents (UN Habitat 2012). Sub-Saharan African cities gain about a million new urban dwellers every year and the region is on pace to match the level of 70 percent urbanization in Europe and North America (UN 2011).

Figure 1. Urban population as percent of total in selected SSA countries



(Source: World Development Indicators, 2013)

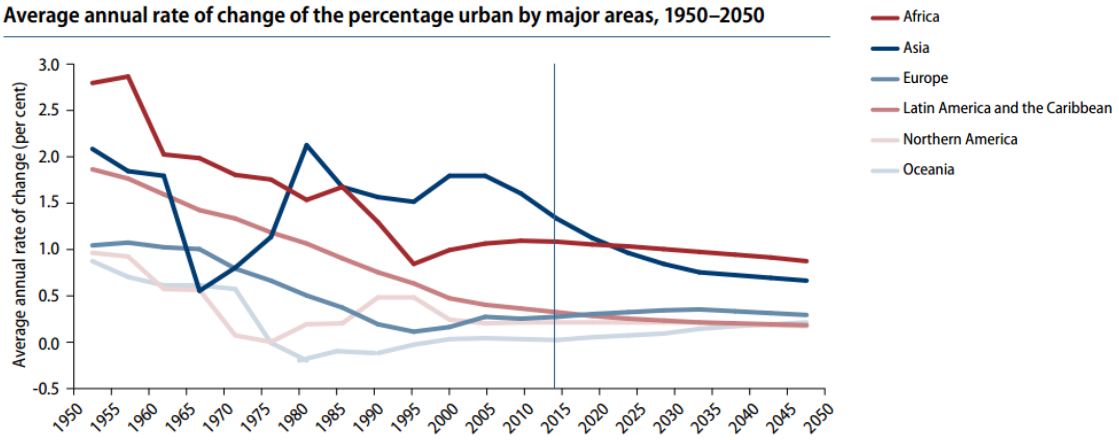
Africa will be the last region to urbanize, though this transition will involve a massive demographic shift. By 2050, Africa is projected to reach 1.2 billion urban dwellers, an urbanization level of 58 percent, and

[7] Appendix 2 presents a table summarizing these challenges.

[8] Appendix 4 details specific tools and interventions for affordable housing provision. Appendix 5 includes a detailed discussion of recommendations based on the supply and demand side value chain approach.

an average density of 79 persons per square kilometer.[9] Within the next two decades, the continent's total population is projected to overtake Europe, South America, and North America's combined. With over a quarter of the world's fastest growing cities, Africa is undergoing a massive urban transition rivaled only by that of Asia, although the nature and pace of urbanization varies widely among countries (Figure 2).[10] Though Asia is currently ahead, Africa is expected to urbanize the fastest globally from 2020 to 2050. Nigeria, in particular, is projected to contribute 8 percent of the world's population growth by 2050 (212 million out of 2.5 billion). Democratic Republic of the Congo, Ethiopia, and Tanzania will each grow by 50 million. While Cairo, Kinshasha, and Lagos are the only African megacities in 2014, Dar es Salaam, Johannesburg, and Luanda will follow suit by 2030.[11]

Figure 2. Average annual rate of change of percentage urban by regions



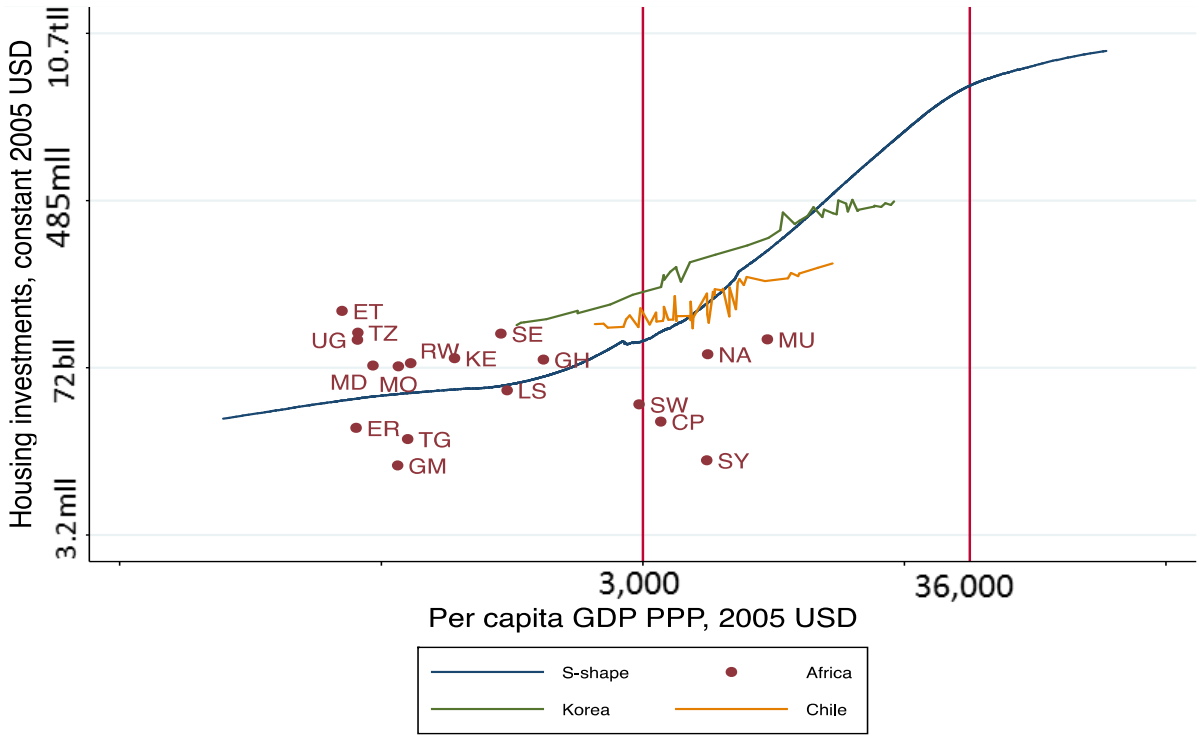
(Source: United Nations 2014)

Urban areas are major drivers of economic growth. People migrate to cities in search of economic opportunity and cities attract firms and investment because of the concentration of a diverse labor pool. In SSA, cities have been the predominant hubs of informal and formal economic activity; two sectors – construction and natural resource extraction and related services - accounted for 60 percent of regional economic growth during the 1990s (Kessides 2005). Urbanization and per capita income growth tend to happen concurrently, though in Sub Saharan Africa incomes have not kept pace (Clarke Annez and Buckley 2009; Fay and Opal 2000). This is because urbanization many African countries has not been accompanied by industrial growth, but from "push" factors such as poor yields from agriculture (Barrios et al 2006). Due to this, urban migrants tend to be poor and have few prospects for improving their incomes. The challenge for cities in the region is to unlock and extend the benefits of urbanization in spite of low per-capita income growth.

[9] UN-HABITAT, *The State of African Cities 2014: Re-Imagining Sustainable Urban Transitions* (United Nations Human Settlements Programme (UN-Habitat), 2014).
[10] Ibid.
[11] *World Urbanization Prospects: The 2014 Revision, Highlights* (United Nations, Department of Economic and Social Affairs, Population Division, 2014), http://esa.un.org/unpd/wup/Highlights/WUP2014-Highlights.pdf.

The housing sector is an important component of national economic growth. Housing stocks, along with investment and employment in related construction and finance industries, constitute a major component of national economic wealth. Figure XX shows housing investment and per-capita GDP using national accounts data, with SSA countries shown as points. The figure shows that across the world, housing investment and GDP follow an S-shaped curve (shown by the blue line) with a slope that rises between per capita income levels of $3,000 and $36,000 (Dasgupta et al 2014). Where income levels are outside of this range investment levels even out as spending on housing competes with other needs. Most countries in Sub-Saharan Africa are below the $3,000 per-capita GDP threshold and have yet to approach the inflection point where higher levels of investment in housing is likely to begin. Finally, the authors find that the main sources of housing investment in the region derive from household savings (which tends to be small) and government spending, not capital markets, which are a key sources of liquidity and longer term finance for lending institutions and in turn are an important component of housing sector performance.

Figure XX Housing Investment and Per-Capita Income, SSA (2011) and the World (1960-2011)



Note: The vertical lines represent points of inflection

Note: Curve line drawn from all available data 1960-2011

The quality and location of housing has long-term consequences for inclusive growth. For most households, purchasing or building a house is the single largest expenditure they will ever make. A home is also an investment vehicle that can appreciate in value over time, be used for collateral for borrowing and, through inheritance, can be an important component of intergenerational wealth transfer. Where housing is located in proximity to schools, jobs and transit access directly impact the quality of urban life and prospects for social mobility (World Bank 2013). Urban housing tends to be least expensive when it is

located in undesirable areas and is of poor construction quality, often on the fringes where land is not expensive to purchase or occupation will go unnoticed by land owners. While housing options in these areas may be affordable to the urban poor, the additional burdens imposed by long commute times, public health problems from inadequate water and sanitation and the lack of education and health services represent substantial indirect costs.

A. Differentiating Formal and Informal Housing

Formal housing is the product of specialized supply and demand-side value chains.[12] Formal housing units are the product of coordination between public and private sector activities in land, construction, finance and regulation. These two value chains form the backbone of a country's housing delivery system, which consists of private finance and construction entities, technologies, capital flows, and government regulatory, investment and administrative institutions that are involved in housing within the country. The strong housing delivery systems that now exist in developed nations have taken more than a century to evolve and build. The key features for the supply and demand side value chains are shown in Box XX below.

Box XX: Elements of a strong formal housing system

Supply Side

1. *Land titling systems* that are buttressed by title insurance or its financial equivalent.
2. *Land recording and transfer systems* that enable quick, inexpensive, title searches and updates.
3. *Zoning and rezoning*, especially with respect to use (e.g. agriculture to urban).
4. *Efficient judicial systems* to resolve land-ownership and land-use disputes.
5. *Active land markets* with adequate supply, rather than land sequestration that prevents development.
6. *Trunk infrastructure grids* that either reach developable land or can be extended to growing areas.
7. *Builders and developers* who can regularly deliver homes at fixed prices.

Demand side

1. *Macroeconomic or monetary policy* that allows stable or slow-evolving interest rates and means of mitigating householders' exogenous risks (e.g. hyperinflation, interest-rate spikes).
2. *Primary Mortgage Institutions (PMIs)* that can originate standardized, performing portfolios of loans.
3. *Mortgage originators* to take applications and handle credit procedures consistent with PMI requirements.
4. *Secondary-mortgage-market liquidity* to enable primary mortgage institutions (PMIs) to remain active.
5. *Mortgage law* that is clear and well settled.
6. *A large population of salaried workers* where even below-median workers have a formal job and pay slip.
7. *Reliable foreclosure-enforcement* by local officials.

However, most housing in SSA is produced and consumed through informal channels. UN-Habitat suggests the self-build model is "perhaps the only housing approach common to all African countries that

[12] Housing 'formality' typically means a home (i) has valid legal title, (ii) is structurally sound and comports with local building codes, and (iii) can be pledged as collateral for a long-term mortgage loan. Informality consists of deviations from these standards. The definition of formality describes the housing sector in developed economies, but it refers to a very small if incomplete segment of the housing sector in developing countries, particularly in Sub-Saharan Africa.

is affordable at the household level."[13] Informal channels are the dominant housing delivery system across the region, contributing perhaps 75 percent of the total housing stock**.** Similarly, the case studies find that the informal sector supplies well over the majority of demand in Nigeria (80 percent), Ghana (90 percent)[14] urban Ethiopia (65 percent), urban Senegal (80 percent), Zambia (80 percent)[15] and Cameroon (97 percent).[16] [17] Most of the housing stock in South Sudan, Togo, Swaziland, Namibia, Zambia, Senegal, Seychelles, Malawi, Lesotho, Gambia, and Burundi, among others, is self-built. [18]In other countries, all affordable housing is produced informally such as in Malawi[19] and Liberia. Box XX identifies common features of housing informality.

Box XX: Characteristics of Informal Housing

Housing is informal if it does not conform to the laws and regulatory frameworks that govern land and buildings (UN-Habitat 2003). Within this definition, there are a range of different tenure and building quality situations. In SSA, informal housing has one or more of the following characteristics:

- Located at the urban periphery or within the interstices of the formal city;
- Self-designed and self-built with local materials;
- Does not fully conform to building and land use standards
- Poorly serviced (if serviced at all) by network infrastructure and public services;
- Financed out of family/group savings or loans from informal lenders;
- Incrementally improved by the occupant over a long period of time.

Informality can also be measured across a series of other variables that are best described across a graduated continuum. For example, some housing is physically as durable as anything formal though simply may not have required permits or inspections; at the other end of the spectrum, some housing is made of scavenged and impermanent materials on titled land.

The prevalence of housing informality is linked to conditions of poverty. Housing informality is the result of both economic factors that limit household and commercial investment in housing, as well as legal, institutional and market factors that limit the production of quality units to scale. Unlike in developed economies, where formality is the norm both in supply (e.g. home construction) and demand (e.g. mortgage loans for home purchase), within Sub-Saharan Africa, the formal housing sector, represents a very small portion of housing production and consumption because of a mismatch in the cost of a quality housing unit and a households' abilities to pay for it.

The ubiquity of informal housing conditions are a result of both low per capita incomes and barriers that raise the cost of building and consuming housing. These barriers include weak land titling systems, unreliable and incomplete infrastructure grids, and limits to capital markets for providing sources of

[13] UN-Habitat, "Affordable Land and Housing in Africa," (Kenya: UN-Habitat, 2011).
[14] UN-Habitat, "Ghana Housing Profile," (2011).
[15] In the capital city of Lusaka, 70 percent of housing is informal and accommodates 90 percent of the city's population while occupying 20 percent of residential land UN-Habitat, "Zambia Urban Housing Sector Profile," (2012).
[16] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[17] UN-Habitat, "Zambia Urban Housing Sector Profile," (2012).
[18] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[19] UN-Habitat, "Malawi Urban Housing Sector Profile," (2011).

consumer and developer finance. In addition to low per capita income and low household spending on housing, these factors both constrain the expansion of the formal housing sector and sustain the informal delivery of housing as a less expensive alternative. This study demonstrates that in SSA (1) housing informality is normal, while formality is the exception, and (2) quantitative information with respect to informality is scarce and non-standardized.[20] These two factors make it difficult to estimate and compare the size and dynamics of housing markets and dimensions of affordability across the region.

The delivery of informal housing occurs through an alternative value chain. This report will demonstrate how informal housing represents a least-cost option for the urban poor. However, while informal housing may cost less, there are important and long-term negative impacts to both the quality of life of the urban poor and the contributions of housing to the domestic economy. Changing this requires the support and participation of the public and private sectors in order to both expand access to housing and living conditions in informal settlements. For example, formal housing developments have connections to trunk utility lines (e.g. water, electricity, sewage) while informal settlements either grow without them or obtain less efficient substitutes (e.g. sharing or stealing power connections, relying on unimproved wells, water trucks, and pit latrines). Lending institutions can use property as collateral for loans to homebuyers or developers, but in SSA, land tenure issues limit this activity. The reliance on personal savings or informal lending also reduces the amount of investment available for housing. Box XX describes the characteristics and sequence of informal housing construction, demonstrating how people use informal channels to access housing.

Box XX: Informal home construction process in Sub-Saharan Africa[21,22,23,24]

Informal dwellings tend to be constructed along a similar general process across SSA countries. The process proceeds as follows: 1) A household begins to collect materials and look for a piece of land which may be available in fairly consistent-sized plots; 2) a customary authority, private owner or government owner is approached for a lease on the land; 3) a sale is made and a written agreement is issued; 4) the prospective owner then finds a building contractor, usually a mason or bricklayer who forms the core of a loose group of artisans who work together.

The size and type of building is discussed and compared against similar units. The cost usually only includes labor and quite often depends on what the contractor thinks the owner can afford rather than the strict cost of the work. The prospective owner is expected to provide all the materials or pay for the builder to access them and bring them to site. Some contractors possess no capital and must ask the owner to pay for all materials and wages throughout the process. The dwelling is constructed to the roughly agreed design as the materials come available.

When the flow of materials stops due to a lack of financing, the contractor goes onto another job. As construction proceeds, the owner must also apply for infrastructure hook-ups and provide the money to pay for them. Friends, relatives and employers may provide some capital, as bank loans or mortgages are largely absent.

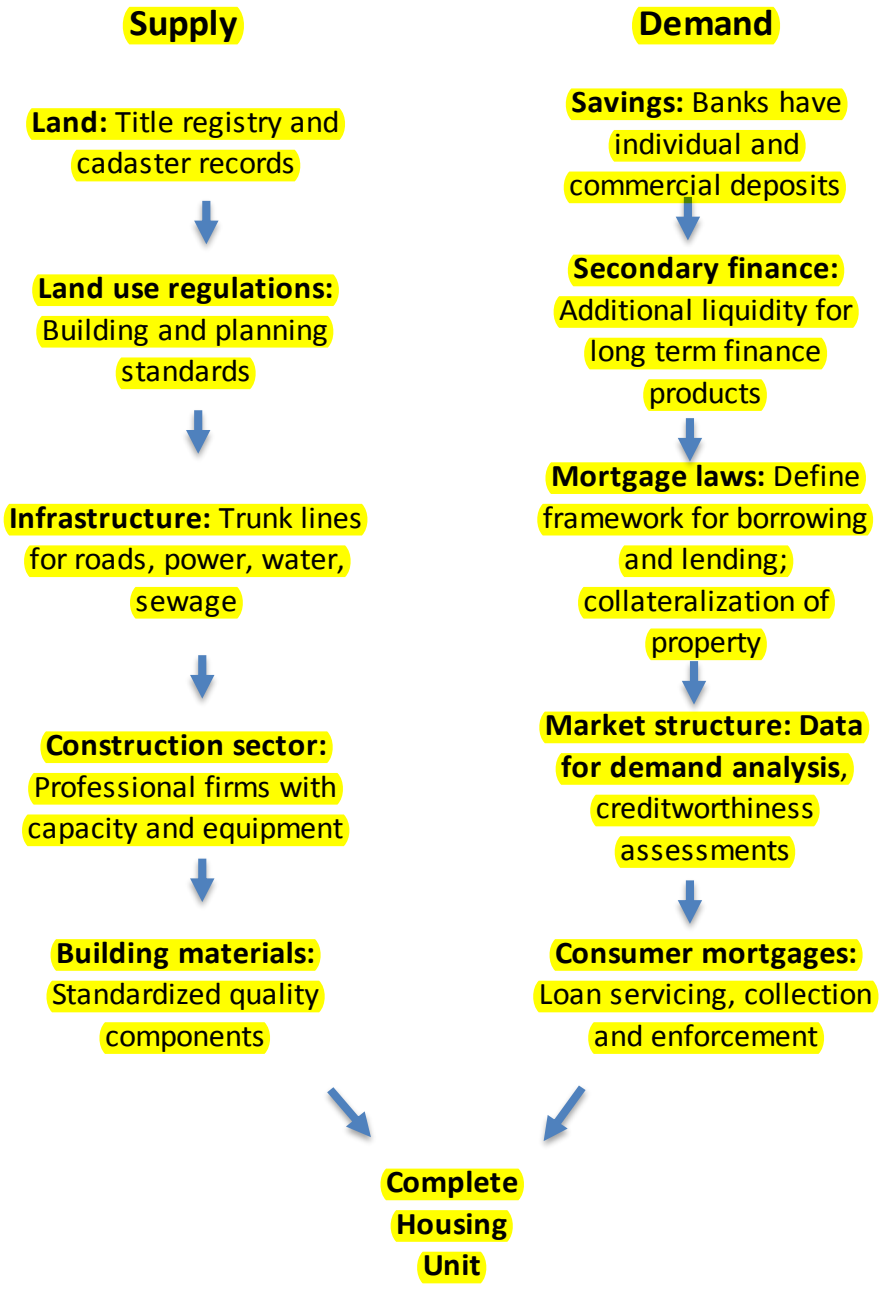
[20] The scarcity in data is due to a tendency by governments and the private sector to to privilege the formal housing delivery system in their analyses and assessments, in part because of experience in developed countries but also because traditional tools for assessing the housing markets rely on data sources that assume a formal delivery system.
[21] A. G. Tipple et al., "Housing Supply in Ghana: A Study of Accra, Kumasi and Berekum," *Progress in Planning* 51, no. 4 (1999): 253–324.
[22] *Malawi Urban Housing Sector Profile*.
[23] *Ghana Housing Profile*.
[24] *Zambia Urban Housing Sector Profile* (UN Habitat, 2012).

Incremental construction occurs vertically, which involves the construction of the whole house from the ground up in several stages: foundations, walls, roof and finishing. Many months or years may pass between each stage as money and materials are collected. Occupation tends to occur at the end of a very long period, although caretakers may occupy the unfinished house. It may also happen "horizontally," where construction occurs outward over many years upon the completion of an initial room or living space. Occupation tends to start very early on as soon as the first rooms are ready.

C. Analytical Framework and Data Collection

This report analyzes the region's housing sector along supply- and demand-side value chains. As a basis for comparison, Figure 3 shows the supply and demand side value chains for the delivery of formal housing. On the supply side, inputs such as land, infrastructure, design and construction proceed in parallel with a corresponding set of demand side inputs related to housing finance. The supply side assumes that land and property markets are active and widespread, that legal claims to property are clear and enforceable and price information is widely known. Further, it also requires that a reasonable set of construction, planning and infrastructure standards is supported by governments and to which private development activity conforms. Construction firms must also have access to large amounts of capital in order to complete housing projects and sell them to consumers with the assistance of mortgage products. In order for banks to create mortgage tools, they have obtain savings deposits and other sources of capital that can be used for long term debt instruments. A formal housing delivery system is complex and requires an integrated sequence of inputs (e.g. land, materials, infrastructure) along with regulatory, institutional and financial capacities to support them.

Figure 3. Supply and Demand Side Value Chains for Housing Delivery



Each value chain must be clearly mapped and understood in order to clarify the basis for policy intervention. In between the two end points shown in Figure 3 is a complicated, interconnected series of markets, capital and resource movements that enable an effective housing delivery system. For the housing production value chain to be successful and efficient, the flows of capital and resource investments must be well-timed, appropriate for specific links in the chain and sequential to one another. Supply side and demand side do not advance in lockstep, so it is useful to identify which roles should be filled during which period of time in the production process.

Comparing formal and informal value chains will identify areas for policy attention in order to improve the function and affordability of the housing sector. The informal housing sector has a separate, but parallel value chain system. However, this value chain is not adequate for providing quality housing for the urban poor. A self-built house represents a household's adaptation to the cost and availability of materials, construction designs and the cost of complying with or avoiding formal building standards. The purpose of the value chain approach is to map out the main constraints for supply and demand that impact: (1) the housing sector as a whole, (2) have particular relevance for the informal sector and urban poor and (3) the enhancement of the formal housing sector, which is very small in most countries. Each sector is compared to identify systemic gaps or blockages in value chains, develop cross-country comparisons, and to illuminate important functional processes within the housing value chains that are often overlooked, especially on the informal system.

Table 3 compares a formal housing delivery system typically found in developed economies with common conditions found across SSA. The table previews the key findings and discussion in sections 3-5 by showing how supply and demand side factors in the region contrast starkly with formal housing delivery factors. For illustrative purposes, the tables below present schematics of the formal and informal value chains for both the supply side and the demand side. The report finds that informal issues effecting land supply, such as alternative tenure systems and property rights that are poorly defined and protected, are common across the region. It should be noted that in many places, informality is not confined to the urban poor, and a range of income levels can be served by the informal housing market.

Table 3: Comparative Summary of Housing Delivery Conditions in SSA

	Housing Delivery Component	Formal	**Common SSA condition**
Supply	*Land Tenure and Administration*	Freehold or leasehold title; title or deed registry	**Competing tenure systems and or absence of title:** squatting; land invasions; illicit subdivision and sales
	Planning Standards and Regulations	Compliance with FAR, site setbacks, building codes	**Variation in site density, design and lot coverage**
	Construction sector	Sector with professional, licensed workers	**Self-built, or use of informal unlicensed laborers**
	Building Materials	Mass produced materials with standardized quality	**Variation in type and quality of materials:** Scavenged items, traditional manufacturing techniques, some use of manufactured materials where they can be obtained

	Infrastructure	Trunk line utility connections	**No trunk lines:** illegal wiring, pit latrines, household cisterns
Demand	*Formal savings accounts*	Savings account deposits used for mortgage lending	**Little formal savings:** Reduces capital available for lending to consumers or developers
	Underwriting and verification	Assessment of income and creditworthiness to create mortgage terms	**Lack of formal income and land collateral:** Reduces eligibility for housing subsidy programs, raises risks profile for commercial mortgage lending
	Mortgage loans	Long term loan for obtaining complete, titled house	**Few mortgages:** Most households use **p**ersonal savings, microcredit, savings groups and other non-commercial sources

The value chains that support the production and consumption of formal housing in SSA are weak and oriented toward high-income groups. Formal housing requires the entire value chain sequence to work; and requires both sources of private capital and public sector attention to infrastructure appropriate regulations and standards. The formal system only operates effectively at scale if *all* of these elements are adequately populated and effective – and in emerging countries generally, and Sub-Saharan Africa in particular, the public and large-scale elements (e.g. infrastructure and capital markets) are not keeping up with the private and small-scale activity of millions of Africans swelling the region's cities.

The size and function of informal housing delivery is difficult to quantify. By its nature, the informality of housing delivery is non-compliant with the formal regulation and administrative structures, and in many aspects informal economic and social systems operate with indifference to the formal system. There are several reasons for this, the most important of which is that formal structures impose additional costs (taxes, regulations, prohibitions) on housing in ways that appear greater than the immediate benefits they seem to confer (safety, ability to finance, political voice). Low-income households may have neither the resources nor the awareness to satisfy these additional requirements. Thus informal delivery networks are not well recorded; they are personal, cash-based, transitory, and conducted in private.

Data on the informal housing sector in Africa is scarce. This is both a constraint to the study and also illustrative of a key challenge that currently limits affordable housing policy interventions in the region. Existing literature documents settlement conditions that vary greatly within countries, across countries and over time.[25] This precludes a broad and representative assessment of affordability conditions within

[25] Definitions of key terms also vary according to context. Tenure categories are difficult to compare across countries because they confer different rights and have different levels of legal clarity and enforcement. Also, as previously discussed, definitions of "slums" and "informality" refer to a continuum of inter-related issues that includes built-environment characteristics but also financial and regulatory systems and legal frameworks

the region for several reasons. First, studies with quantitative data useful for affordability analyses are small and difficult to aggregate in a meaningful way to reflect country or regional market conditions. Second, the data collection procedures for studies vary widely, which reduces the reliability of the data and its usefulness for generalizing conclusions.[26] Finally, most base-of-the-pyramid analyses that are used to develop affordability analyses tend to draw heavily on case study formats, which by nature are context-specific and make limited use of quantitative data (Pralahad 2004; World Resources Institute 2007).

These fundamental data limitations limit the representativeness of a number of the findings from particular countries. However, the study identifies patterns of continuity across the region that permit general assessments and some initial policy directions based on differences in per capita income and urbanization across countries in the region. The report finds that the informal sector acts as the key means of both housing delivery and finance in Sub-Saharan Africa. Given better availability of data, policy makers would have evidence of its importance in job creation, finance mobilization, and housing development, and therefore the informal sector would attract more resources and future investments in housing, and infrastructure upgrading would have greater impact in reducing poverty.

Governments and other decision-makers in Sub-Saharan Africa should be equipped with a comprehensive understanding of the housing sector in the region and in their individual countries. However, this regional report demonstrates that the informal sector is grossly under-studied and that available published information is inadequate given the importance of having better evidentiary bases for recommendations. Necessary data is very limited for most countries and only includes the most basic indicators such as rooms occupied and services available, and is undifferentiated between formal and informal sectors. The following section collates the data that is available in the general literature and, through primary research in Nigeria, Cameroon, and Ethiopia, to describe the fundamental challenges and trends of the housing systems in SSA.

Improving the scope of access to affordable housing requires identifying how informality can be changed over time. This means that policy initiatives must act with both a long-term and short-term view; long term toward a vision of the end state, and short term so that each incremental initiative is sound both for the long-term vision (i.e. enabling further innovations and buildup) and in the local political economy (i.e. aligning with local interests, priorities and capacities). The best avenue to reaching housing formality in Sub-Saharan Africa is through addressing improvements in value-chain systems by degrees and steps. Incremental improvements for the informal sector will reduce their distance from total formality according to different sections of value chains.[27] If the housing challenge is to be effectively addressed by increasing the stock of decent, affordable housing, the role of the informal sector must be

[26] For example, at the most basic level, there are data on housing expenditures and qualities in some informal neighborhoods, but this cannot be generalized to the whole informal sector in the city, let alone the country or the region. Similarly, research exists on many other topics that also provides ancillary data on informal settlement conditions. For example: on quality of life and on the housing-health nexus in informal settlements in South Africa (Richards and Mutsonziwa 2007); living conditions and housing costs in 'slums' in Nairobi (Gulyani and Talukdar 2008) and their micro-enterprises (Gulyani and Talukdar 2010); and additional research from previous decades. John Turner's seminal work (1976) is an illustrative case study, but the data presented are not consistent or comparable enough to be aggregated with any confidence for regional generalization. While such aggregated data may be available in the formal sector through relatively reliable and transparently collected census data or the Demographic and Health Surveys conducted by USAID, there remain limits to their comparability and representativeness.

[27] This is a view that has been developed by scholars and practitioners since expressed in Abrams' (1964) seminal work as well as that of Turner (1976) and others.

effectively recognized, in its multiple facets, in both the supply-side value chain and demand-side value chains.[28]

3. Housing in SSA: Overall Features and Trends

While the lack of affordable housing is a common trend, actual demand gaps are difficult to estimate. A recent World Bank study suggests that over the last decade, housing shortages have not improved significantly over time, and even worsened for some countries. Notably, Senegal experienced a 102.4 percent increase in its shelter shortage for a total of 66.9 percent of households in need by 2005 (Lozano Gracia and Young 2014).[29] Overall, housing shortage estimates lack consistency and reliability. Estimates vary significantly from country to country, and even within countries. No widely accepted methodology is currently in use in the region. Censuses often omit the sort of data required for housing need calculations, such as the number of persons per room.[30] Other censuses, such as Lesotho's for example, do not even provide data on the number of urban dwellings.[31] When survey and census instruments do not request household and dwelling information, it basic information necessary for policy consideration is omitted.[32]

[28] For a framework of understanding formality and informality as it relates to housing finance, please see *Appendix 6. Formality and Informality in Housing Finance.*

[29] Housing shortage change is estimated by difference between the share of respondents reporting a lack of access to quality housing across two separate survey periods. For Senegal this period is 2001-2005.

[30] The number of rooms occupied by a household is generated in the Demographic and Housing Surveys (DHS) being rolled out across Sub-Saharan Africa.

[31] Kingdom of Lesotho (2009). Kingdom of Lesotho (2009) *2006 Lesotho Population and Housing Census: Analytical Report, Volume IIIB Socio-economic characteristics*. Maseru.

[32] UN-HABITAT, *Draft Lesotho Urban Housing Profile* (UN-HABITAT, forthcoming).

Difficulties in Estimating Housing Need: The Case of Ghana

Ghana exemplifies the difficulty of developing reliable estimates of housing need. First, the country's 1987 Housing Policy included a calculation of housing need to meet an occupancy standard of seven people per unit on the grounds that average household size was seven. However, the actual mean household size was actually 4.75 because houses varied from one room to 50 or more, and people occupied a few rooms within them.[1]

In fact, UN-HABITAT's Ghana Housing Profile counts eight separate estimates of housing deficit and annual need in Ghana by various actors, with calculations of the deficit ranging from 250,000 to 1.5 million and calculations of annual need ranging from 70,000 to 133,000.[1] This range makes the development of any subsidies to increase the supply of housing very difficult to determine or justify because of the huge gap in estimates. This inconsistency arises partly from the issue of defining the terms "household" and "dwelling." There is no word for "dwelling" or "household" in several of the major African languages,[1] and census definitions are sometimes poorly framed. The definition of a dwelling in Ghana specifies that it is the space occupied by one household, and but a statistic in the same document reports that there are, in fact, 1.7 households per dwelling.

The highest housing deficit calculation in the report, 1.5 million, comes from the Bank of Ghana and is derived from the argument that 8.7 persons per household represents overcrowding and that housing need should be calculated towards the ideal of one household per dwelling.[1] On the other hand, a mean room occupancy of 3+ people is a long-standing characteristic of urban housing in Ghana, and most households share services or use public ones.

The case demonstrates that without appropriate definitions of occupancy and dwelling, efforts to estimate housing need may be systematically biased and provide little guidance for policy makers.

The prevalence of informal housing makes it difficult to determine current and future housing need. In general, housing shortfalls can be calculated based on three different qualities: i) the numerical shortfall in dwellings (deficit); ii) the qualitative shortfall in physical conditions (obsolescence); and iii) the space shortfall within dwellings (overcrowding). This multi-faceted understanding of housing shortfall underlies the basic methodology used in many of the UN-Habitat Housing Profiles:

(# of available dwellings*) - (dwellings that need major renovation) = usable current stock

*assuming one household per dwelling

(# of households) - (usable current stock) + (# of dwellings to relieve overcrowding) = # of dwellings needed

The above calculation is mechanically simple, but the real difficulty lies in determining standard, objective definitions and values for each of the input variables. Some complications that must be answered include:

- What does the number of available dwellings encompass? Formal and informal, or just formal?
- What should the standard threshold for overcrowding and renovation be?

Some countries count only formal units as legitimate housing stock. South Africa, for example, officially defines its backlog as 2.1 million units, of which 1.1 million are in informal settlements and 1 million live

in inadequate or overcrowded conditions.[33] For Malawi, UN-HABITAT calculates the housing shortage as including the qualitative shortfall under two scenarios: one where semi-permanent housing must be renewed every 10 years and the other every 25 years. Using dwelling equivalents (cost equivalent in dwellings of renovations), the final annual need calculation falls between 31,740 and 43,700 dwellings per year until 2020.[34]

Estimates also may not consider common living arrangements or measures of affordability. In countries where the majority of the population lives in multifamily units (about 60 percent in Ghana,[35] 46 percent in Ethiopia[36]), rooms, rather than dwelling units, may be a better assessment of need because the latter is usually converted into policy as single household dwellings on plots. Rental housing is often a form of occupancy (not a type of shelter) dispersed across owner-occupied homes (e.g. complexes, public housing schemes, private subdivisions, slums, etc.). Rental housing is dispersed across the city and caters to residents of all incomes, landlords and tenants may have similar incomes and live close to each other. [37] Second, many housing statistics only refer to the number of dwellings or rooms without qualifying them based on their affordability. Housing need in SSA is, in fact, much greater when affordability is taken into account, as most formal housing lies beyond the reach of the target population. Section A.3 considers the issue of affordability assessment.

Table 1~~Table 3~~ shows the latest available housing shortage estimates for selected SSA countries, demonstrating that the region does suffer from a lack of affordable housing. However, the assumptions and data used for these estimates are incomplete. First, there is limited data quantifying the supply of housing already supplied informally, whether through self-built housing, rental or rent free arrangements. Nor is it clear how much this housing stock contributes to overcrowding or what proportion lies outside reasonable safety standards. Indeed, it is likely larger in scale than the numbers below depict.

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Table 1~~3~~. Recent housing shortage estimates of selected SSA countries, 2013

Red = Annual additional housing shortage

Black = Overall housing shortage

Country	*Housing Shortage*	*Projections*
Angola	2,000,000	
Burundi	20,000	
Cameroon	100,000	
Cote d'Ivoire	600,000	
Djibouti	2,500 – 3,500	
Ethiopia	1,000,000	Additional 225,000 backlog/year
Ghana	1,600,000	5.7 million short by 2020
Kenya	150,000	
Madagascar	2,000,000	Additional 100,000 backlog/year
Namibia	100,000	

[33] *2013 Housing Finance Yearbook* (Centre for Affordable Housing Finance in Africa, 2013).
[34] *Malawi Urban Housing Sector Profile* (UN Habitat, 2011).
[35] UN-Habitat, "Ghana Housing Profile," (2011).
[36] Ethiopia 2007 Population and Housing Census.
[37] *Rental Housing: A Much Neglected Housing Option for the Poor*, Housing the Poor in African Cities (UN-Habitat and Cities Alliance, 2011).

Niger	40,000	
Nigeria	17,000,000	
Rwanda	34,000	Backlog by 2022: 458,265
Senegal	200,000	Annual increase 10%
South Africa	2,100,000	
Tanzania	3,000,000	
Uganda	560,000 – 1,600,000	Backlog – 8,000,000 by 2020 if no countermeasures
Zambia	1,300,000	
Zimbabwe	1,250,000	

(Source: CAHF 2013)

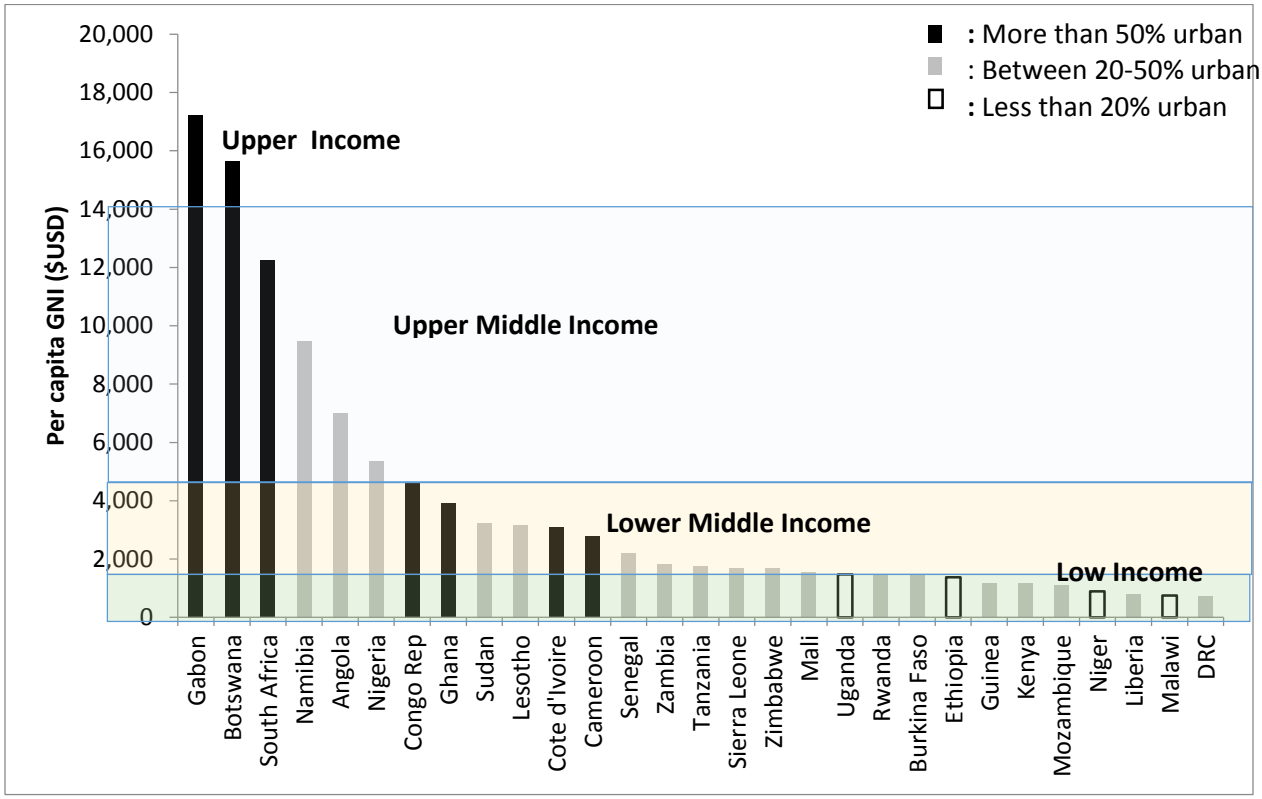
Sub Saharan Africa faces a chronic housing challenge that goes beyond deficits in the formal housing supply. The debate in estimating current and future housing demand that African cities face a shortage of housing that can be addressed simply by the construction of more new, formal units. However, this view simplifies the complex challenges that the housing sector faces and ignores the informal mechanisms by which most of the urban poor obtain shelter. It is also clear from experience that ambitious "targets" or "goals" of housing production are seldom achieved and what is built is usually unaffordable for most people. Housing policy, especially for affordability, needs to be considered in terms of the quality of the existing housing stock and conditions, the level of occupancy and overcrowding and the level of infrastructure available to these places.

A.3. The Affordability Gap

Low per-capita incomes limit the ability of households to afford quality housing. At a fundamental level, most households cannot access formal housing for a simple reason: it is beyond the reach of the average household's ability to pay. The weaknesses in delivery value chains on the supply and demand side exacerbate the problem of affordability. Neither governments nor the private sector have been able to close this affordability gap despite significant resources and policies dedicated to the issue. As a consequence, less than ten percent of the population in many African cities and towns live in formal housing.[38] Figure XX shows the urbanization and per-capita income of 29 SSA countries. Not surprisingly, it reveals that countries with higher per-capita incomes also tend to be more urban. It also demonstrates that the majority of countries have Lower-Middle Income and Low-Income status.

[38] Basab Dasgupta, et al., "Urbanization and Housing Investment" (World Bank, 2014).

Figure XX: Urbanization and GNI Per-Capita ($USD) in Select SSA Countries, 2014



(Source: World Bank 2014.)

In many countries, the price of the least expensive formal housing is vastly beyond the average ability to pay.

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Table 2~~Table 4~~ illustrates two important findings about housing affordability hold true throughout most of urban SSA. Housing produced through formal channels is far too expensive for most people. Even what governments define as "affordable housing" – typically, formal housing targeted at those households who cannot afford a market unit – is not actually affordable to most households in that category. Instead, truly affordable housing is often available through the informal sector. For example, in Malawi, the lease expensive available house is almost 57 times more expensive than a typical informal shelter alternative.

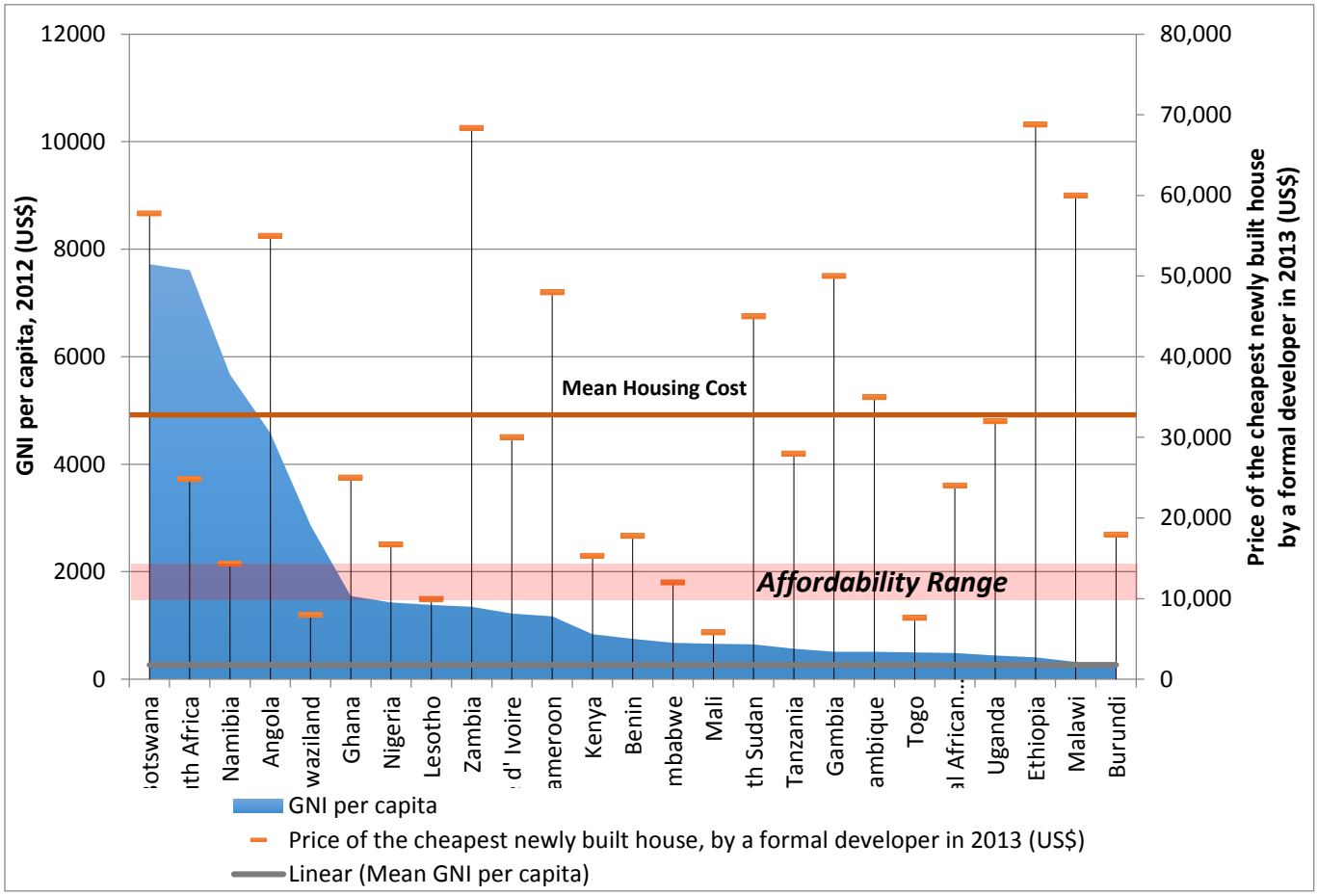
Formal housing costs and per-capita incomes in countries across the region are mismatched. Figure 4 shows 2011-2013 data from the Center for Affordable Housing Finance in Africa (CAHF) on the price and

size of the least expensive newly built house by a formal, private developer in select countries.[39] It shows that across country income levels, formal housing is expensive. The mean per-capita income is $1,764, while the average house price is $31,085. The red band shown on Figure 4 identifies the price of an affordable house within a range of 3 to 5 times annual income; a standard affordability measure. It shows that the cost of most houses are far outside this range. The variation in cost across the region also likely reflects different weaknesses within housing delivery systems. For example, both the Gambia and Democratic Republic of Congo, both countries with low per-capita incomes, have among the highest housing prices; more than twice those of Botswana and South Africa, which have higher per-capita incomes. However, other low-income countries, such as Mali and Niger have among the lowest cost for formal housing. Out of the 25 countries in SSA that are listed, only five countries (South Africa, Namibia, Swaziland, Lesotho, and Mali) have a Gross National Income (GNI) per capita higher than or on par with the least expensive formal dwelling. While GNI per capita is a rough macroeconomic proxy for affordability, this finding points clearly to a gap between what the formal sector can provide and what SSA populations need.[40]

[39] Housing price data are collected through a convenience sample of private developer respondents. Housing quality and sizes, along with the cost of land vary between countries.

[40] CAHF's data is limited because it refers to the least expensive dwelling provided by the private sector only and neglects any dwellings provided by government housing programs. It is also unclear how much, if any, subsidies are hidden in these house prices, such as discounted construction materials or the allocation of public land at below market prices. Therefore, a more systematic review of affordability, as in Table 4, is essential.

Figure 4. Relationship of income to house prices in SSA



(Source: CAHF Yearbook 2013)

Conventional measures of housing affordability reveal a tremendous gap in the affordability of formal housing. This pattern is found across the range of countries shown in Figure 7. The least expensive house in Malawi, a low-income country, according to the CAHF's research, costs US$60,000. Assuming a typical household expenditure cap of 30 percent of income on mortgage payments, a borrower must earn at least US$320 a month. Only the top 1 percent of the population in Malawi is thus eligible for this house.[41] In Botswana, a country with a much higher per-capita income than Malawi or Ghana, the relationship is the same. For example, The Botswana Housing Corporation (BHC) sells their least expensive 54 m^2 unit on a 400 m^2 plot at US$55,564. BHC suggests a minimum monthly mortgage payment of US$450 for this property, which means that at a 30 percent affordability level, a household must earn at least US$1,402 a month to pay it off. Given that half of Botswana lives on less than the international poverty line of US$60/month, it is clear that even the country's primary housing developer and sole government housing authority cannot reach more than half of the population with new, formally-constructed units.[42]

[41] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets* (Centre for Affordable Housing Finance in Africa, 2013).
[42] Ibid.

Figure 5. Housing Affordability Pyramid for Ghana

Income Range	Income GHC/month	Percentage of all Households	Maximum affordability (in GHC) assuming 3 times annual income	Housing cost (GHC) aimed at the thresholds[43]	Monthly maximum rent levels (GHC) affordable at R:Y of 10%
Very High	>4,000	**5%**	180,000	476,000 & 204,000	500 +
High	3,001-4,000	**10%**	144,000	163,200	400
Mid-high	2,001-3,000	**50% of households can afford housing costing between GHC12,001 and GHC72,000**	108,000	95,200	300
Middle	1,001-2,000		72,000	Up to 54,000	200
Moderate	501-1,000		36,000		100
Low income	101-500		18,000		50
	51-100	**35% of households can afford housing costing GHC12,000 or less**	12,000		10
No wage income	0-50				

Source: UN Habitat 2011

Housing also remains unaffordable in lower middle-income countries. Figure 5~~Figure 5~~ depicts an affordability pyramid for Ghana, a lower middle-income country, based on a locally calibrated maximum house-to-income ratio of 3, which means that 85 percent of households are unable to access housing that costs above GHC 72,000 (US$22,378). For reference, the least expensive newly built house from a formal developer in Ghana costs US$25,000.[44,45] Figures 6 and 7 are drawn from CAHF affordability analyses of Cameroon and Nigeria, respectively. The pyramids show that in each country, significant portions of the population live at or below the international poverty line of US$2 per day or about US$30 per month. In each case, the cost of a mortgage far exceeds the ability of most to pay. In Cameroon, only 2 percent of the population has access to mortgage finance. In Nigeria, a minimum wage earner drawing a monthly income of US$116 (which is twice as much as more than 75 percent of the population earns) would only be able to finance US$4,685. This would only cover one quarter of the value of the lowest cost house.

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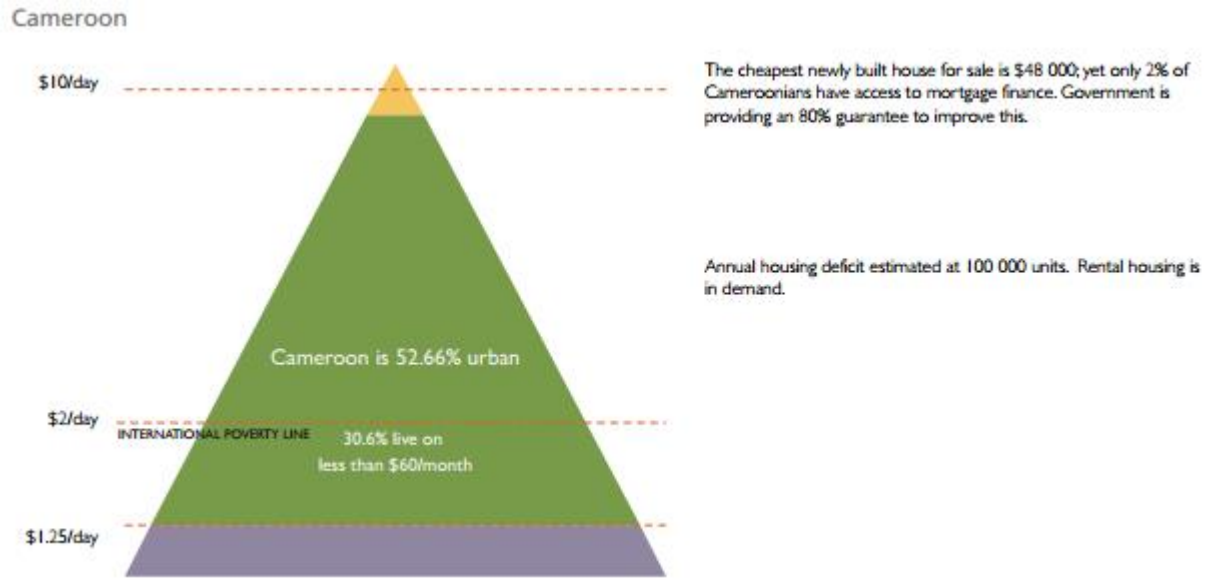
[43] Karley (2008: 10) adjusted for 2010 values and assuming one-third of income as housing payments.
[44] Ibid.
[45] CAHF has developed affordability pyramids to highlight the differing opportunity sets of various income segments for each African country, in subjective illustrations that marshal a wide range of data and knowledge of particular policy measures in each country. The full set can be found in: CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets* (Centre for Affordable Housing Finance in Africa, 2013).

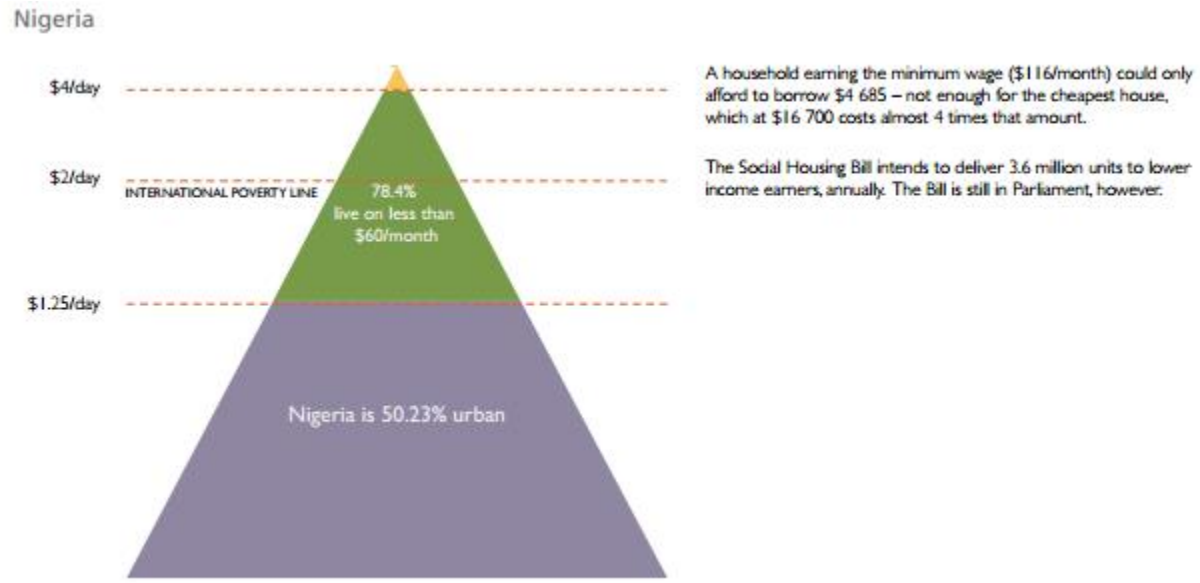
Figure 6. CAHF Yearbook Affordability Pyramids for Cameroon



(Source: CAHF 2013)

In each case, opportunities for expanding formal housing consumption are limited by low incomes. The pyramids also show the current market segmentation of demand for housing in each country. In both cases, the market for commercial housing finance, represented in yellow, is very small. The population represented in green consists of those who will consume housing incrementally through small loans or savings that are used to build home improvements over time. The bottom of the pyramid consists those who have little income or savings and without heavy subsidies can only consume housing through informal channels or through renting (see Section B.5).

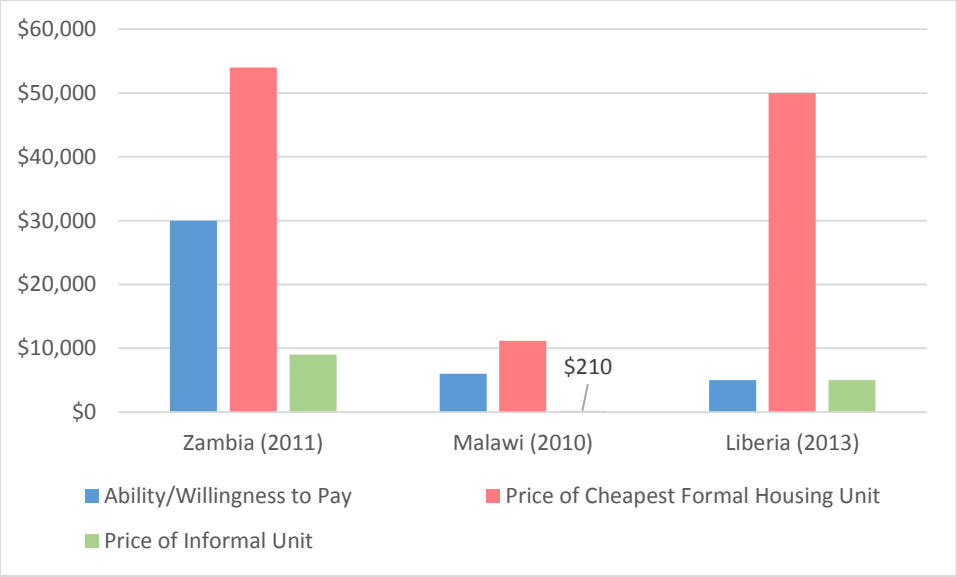
Figure 7. CAHF Yearbook Affordability Pyramids for Nigeria



(Source: CAHF 2013)

Yellow	Good access to housing; targeted by formal development
Green	Opportunity for further market development; households may invest if affordable product is available; often build their homes incrementally.
Purple	Requires government subsidies; could be the target of Public-Private Partnerships.

Table 24. Housing cost comparisons: formal vs. informal in Zambia, Malawi, and Liberia[46]



(Source: UN Habitat Housing Sector Profiles)

Conventional measures may even underrepresent the demand for affordable housing.

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Table 2~~Table 4~~ depicts the variation in consumer ability to pay and the price differential between formal and informal housing options. Affordability in SSA differs from affordability in developed economies, and affordability in Zambia differs markedly from affordability in Malawi, though in each case the formal housing alternative is more expensive than typical affordability thresholds. Common measures of affordability that are used in developed economies, such as assuming a 30 percent threshold of household expenditures on housing or a price to income ratio of 3:1 or 5:1 does not provide the most accurate picture for many countries throughout SSA. Indeed, recent research finds that for households in low-income countries, food alone accounts for 50-60 percent of monthly expenditures which in turn reduces the amount available for housing consumption (Lozano-Gracia and Young 2014). (For a full discussion of affordability in SSA, please refer to *Appendix 1. Affordability in Sub-Saharan Africa*.)

Overall, while the depth of affordability gaps vary by country, most countries in SSA share a common affordability challenge, where the majority low to middle-income populations cannot access quality

[46] Data are drawn from UN-Habitat Housing Sector Profiles. No set percentage of affordability is used to measure ability to pay, as affordability is perceived differently in each country. These estimations were validated by local stakeholder workshops for the UN-HABITAT Housing Sector Profiles. Furthermore, as prices can inflate and deflate quickly, time is an important variable to take into account when making comparisons. **Ability/Willingness to Pay**: *Zambia*, between $10,000 and $40,000, validated by willingness to pay data from survey on renting and ownership; *Malawi*, $6,000 from median household consumption of MWK 195,111 (US$1,400), assuming a house to income ratio of 5:1; *Liberia* US$2,500-10,000 or 15% of expenditures given overall low expenditures on housing. **Cheapest formal housing unit**: *Zambia* Zambia National Housing Authority for a 2 bedroom house; *Malawi*, cheapest Malawi Housing Corporation flat, *Liberia,* fully serviced two room eco-home near Roberts International Airport. **Price of informal unit:** *Zambia* US$8,400-9,000 2 room, 24 m2, excluding land or infrastructure cost, *Malawi* 2 room earthen shelter with metal sheets, *Liberia* 4 room unserviced dwelling on Peace Island in Monrovia.

housing. By typical affordability standards, housing costs for the poor across the region and in low-income countries in particular, are extremely high. These conventional measures may even understate the affordability gap; as poor households may not even have 30 percent of their income to spend on housing after accounting for other necessary expenses. In these cases people must consume smaller and lower quality housing options. More research needs to be done in order to refine the conception and determination of affordability. This would include research on what house-to-income ratios make sense, and how households allocate their budgets towards other needs such as food and transportation.[47] Then, the price of the least expensive formal housing – whether developed by a private or public actor – must be compared to the price of informal housing, with these prices being updated on a regular basis. When the least expensive formal housing lies above ability to pay, while informal housing lies within reach, it is no surprise that informality dominates the housing landscape.

A.5. Rental is an important affordable tenure option, particularly in the context of self-built housing.

Rental housing is a common source of affordable housing for middle- and low-income households in SSA. However, it is likely that many people rent land, houses or rooms through the informal market, making it difficult to assess prices and the quality of rental accommodations. Renting is appealing to new migrants that do not have money or time to purchase or build a home or who need mobility to pursue work opportunities in different places. However, there are limited data on rental tenure, especially among low-income groups because it is often supplied and consumed informally through cash transactions or petty landlordships. **Table 3**~~Table 5~~ below aggregates some of the available data on housing tenure for select SSA countries. The data showthat rental housing is an essential tenure option in many of these countries, particularly Zambia, Uganda, Ghana, and Ethiopia. In Malawi, where rental housing is the least common, home-ownership is universal due to the large numbers of self-built households, rent-free living arrangements and employer housing. Instead of renting being the less expensive option, it is more unaffordable, and owners in informal settlements are thus "failed renters."[48]

Table 3~~5~~. Housing tenures in selected SSA countries

	Owner-occupied	***Rental***	***Other***
Zambia (Urban; 2006)	46.4%	44.7%	9.1% (Rent-free; employer housing; other)
Uganda (National; 2010)	30%	57%	13% (Unspecified)
Ghana (Urban; 2008)	26.1%	40.9%	31.7% (Rent-free)
Malawi (Urban; 2005)	42%	10%	48% (Rent-free; employer housing)
Nigeria (National; 2006)	70.83%	22.72%	6.45%

[47] Lozano-Gracia and Young (2014) have found that in most African countries, food expenditures remain above 50% of total expenditures for 60% or more of the population. As income levels rise, the share of food expenditures decreases. The authors suggest that increased expenditure on housing will not occur in developing countries if food expenditures remain high.

[48] *Malawi Urban Housing Sector Profile*.

Cameroon (National; 2005)	65%	26.7%	8.3% (Rent to buy; employer housing; housed by parents/friends; other)
Ethiopia (Urban; 2007)	39.31%	53.76	6.94% (Rent-free)

(Source: UN Habitat Housing Profiles, case studies on Nigeria, Cameroon, and Ethiopia)

Rental typologies vary widely within and among countries as well, and can exist in the formal or informal market. For example, in South Africa, informal rentals are estimated to comprise 20 percent of the market, or about 400,000 households (UN-Habitat 2011). By contrast, in Cameroon, a significant proportion (41.3 percent) of the rental market is in "multi-dwelling units," which can accommodate multiple households in adjoined structures, followed by concessions (24.3 percent), detached houses (22.7 percent), flats/apartment buildings (7.9 percent), modern villas (2.3 percent), and other forms (1.5 percent).[49] Undocumented rental arrangements can place tenants at greater risk for eviction without due notice or through unforeseen rent increases. However, rent-free arrangements, especially among family members, are also convenient and common, especially where other options may be limited.

Across the region, the market for formal rental units is weak and is directed toward professionals.[50] Few developers are willing to embark on building rental real estate.[51] Most African government began halting investments in rental housing during the mid-1980's, as the approach was disfavored for its inefficiency. Much of the existing rental stock consists of institutional housing built by government ministries, local authorities, or major industries[52] for their workers. At the top of the market in SSA, there is a thriving rental sector for high-income expatriate professionals (diplomats, NGO country representatives, senior managers in industries, etc.) which tends to operate internationally and may extract rent in dollars rather than local currency.[53] In general, public provision of rental housing is limited and increasingly dwindling. In some countries, however, housing for civil servants (including university staff, teachers, health workers, etc.) is routinely provided by their employers. It is undoubtedly the reason why many workers stay in the formal sector, where incomes may be very low but the dwelling provided is relatively good quality.

Formal rental housing is also out of reach of most of the urban poor. The case study report of Nigeria finds that 60-70 percent of low-income households are not able to afford the least expensive rental accommodation on the open market (around US$1,200 per year in major cities), of which there is a negligible supply. A much larger proportion of low income-households is unable to afford mortgage payments on the least expensive accommodations that are advertised for sale (around US$62,000 in major cities, which at repayments of 40 percent of household income would require an annual income of US$15,000; that is, only 15-20 percent of the population). In any case, such accommodation would consist

[49] BUCREP, *3è RGPH Volume II - Tome 05: Caractéristiques de l'Habitat et Cadre de Vie Des Populations* (Bureau Central des Recensements et des Etudes de Population (BUCREP), 2012).

[50] The providers of such housing are often members of national elites who see the commercial sense of building for rent or who may build for their retirement and rent out to expatriates in the meantime. This is notably common in Lesotho (personal communication, Kabelo Lethunya, Chief Housing Officer, Government of Lesotho, Maseru).

[51] Ikejiofor, U., (1997), "The Private Sector and Urban Housing Production Process in Nigeria: A Study of Small-Scale Landlords in Abuja", *Habitat International,* vol. 21*, No.*4, pp. 409-425.

[52] For example, council-built and mine-workers' housing in the Copperbelt of Zambia forms a significant percentage of the housing stock.

mainly of two-bedroom flats, which wouldn't comfortably accommodate a family of five, the average household size in Nigeria.

Rent controls negatively affect the supply and quality of formal rental units. Rent control has been quite common for formal and public rental units. An extreme example is Ghana, where rent control was instituted in 1943 and only removed in the 1990s. Its effects paralleled the experience in other countries: landlords removed buildings from residential use, regular maintenance was withdrawn, the new investment was slowed, and other means to increase the net present value of the rent were eventually instigated[54] (in Ghana's case, demanding up to three years' rent in advance). Large upfront payments disqualify those without savings for a lump sum payment. Rent controls overall have exacerbated limited investment in formal rental housing.

The conversion of owner-occupied units demonstrates a strong demand for renting. Where housing is rarely sold, some rental stock emerges from owner-occupied accommodations. Instead of selling the unit, which is infeasible or unfavorable in some SSA countries, the dwelling is rented out.[55] For example, some of the divested institutional housing has been let out by its new owners who could not afford to maintain it. In the Ethiopian Integrated Housing Development Program (IHDP), many condominium apartments are allocated to households who cannot afford them – households pay the deposit and then put in a tenant whose rent covers both their mortgage payments and their rent in less expensive housing elsewhere. Similarly, plot-owners in Southern Africa have been able to make quick profits on backyard shacks built of poles and corrugated metal sheets, or as panels of lapped softwood in kit form (in Zimbabwe), to rent out.[56]

Petty landlordships and subletting arrangements can provide affordable rental housing and generate income. Rental rooms are also provided by owner-occupiers (or even renters) as extra rooms or buildings adjacent to their own dwelling. Many user-initiated modifications to government-built and other housing have been built to provide extra rooms for renting as a supplementary income source, as has occurred with *kebele* housing in Ethiopia for example. Some households decide to occupy smaller spaces within their own home in order to maximize their rental income from the transformed house.[57] In many societies where parents are expected to provide some accommodation for their grown-up children, such rooms may be intended for eventual occupation by family members in the longer term but are let out for the short to medium term. Owners may often have similar economic standing to their tenants; Tipple et al.'s survey of housing supply in Ghana[58] found that owners were not better off than renters in per capita expenditure terms.

Due to constraints on supply, the majority of rental housing in Africa is held by self-help landlords in slums, informal settlements, and private subdivisions. In Nairobi, 92 percent of households in slums, and

[54] Malpezzi, S.K. and Ball, G., (1991), "Rent control in developing countries", *World Bank Discussion Papers* 129, Washington DC.

[55] Rental housing achieved by the supply intended for ownership is not the result of purposeful policy. Landlords in these cases typically have few tenants and tend to operate through personal relationships, which render them unlikely to be exploitative.

[56] Tipple, A. G. (Ed.). (2000). Extending themselves: User-initiated transformations of government-built housing in developing countries. Liverpool University Press.

[57] Ibid.

[58] Tipple, G., Korboe, D., Garrod, G., & Willis, K. (1999). Housing supply in Ghana: a study of Accra, Kumasi and Berekum. *Progress in Planning*, *51*(4), 255-324.

80 percent of total households, are tenants rather than homeowners.[59] As incremental self-build becomes increasingly challenging due to the high cost of urban land, rental and home-sharing options are becoming more popular. Another complicating factor in rental statistics is the tendency to lump other non-ownership tenures, such as room-sharing, in with renting. It is very common, especially in West Africa, for a large population to be housed through their extended family networks. Rent-free tenancy obtained via a relation to the owner of the house (or being part of the family which inherited the building in common) is common in West Africa. This is a very important social safety net, protecting some of the poorest and most vulnerable individuals and households from homelessness and providing housing for recently arrived migrants.[60,61]

Renters are likely to experience conditions of overcrowding and lack legal protections. Renters are more likely to share water supply, toilets, kitchens and bathrooms than owners, and to have to endure worse physical conditions.[62] While renting is congruent with a need for housing mobility, to benefit from job opportunities or to adjust housing for new household circumstances, renters tend to be more liable to having to move than owners due to limited legal protections for eviction of tenants, especially those renting informally. For example, Ghana allows an owner to evict a tenant if the owner needs the room(s) for a family member; something that landlords can use to their advantage to remove tenants quickly rent the unit to someone who will pay more.[63] Eviction is a constant threat over many renters and, while rent legislation and regulation tends to try to give tenants at least some security, too much security will discourage the supply of rental housing through the market.

The report finds that there is a substantial overlap between small-scale rental housing and informal/ self-built housing. Often the initial home becomes the anchor for a multi-room home that accommodates multiple unrelated people or households, or the site becomes a mini-compound where a main house is surrounded by 'backyard shacks' that are rented. It is further generally observed that rental arrangements are governed by verbal agreements rather than written leases, with payments in cash, so that even if the structure is formal the activity is informal. These factors make it very difficult for a government to impose regulation or formality onto the Sub-Saharan African rental sector, as doing so would disrupt a vast body of informal people, housing, employment, and income. A strong housing market must include quality rental housing options across the income scale. However, large-scale development of such housing is often hindered in SSA by a strong home ownership bias in policymaking, lack of accurate and comparable data, and poor regulation of rental agreements, particularly in the informal sector.[64]

[59] UN-HABITAT, *Affordable Land and Housing in Africa* (United Nations Human Settlements Programme (UN-HABITAT), 2014).
[60] Amole, B., Korboe, D. and Tipple, G., (1993), "The family house in West Africa", *Third World Planning Review,* vol. 15, pp. 355-372.
[61] Gough, K. V., & Yankson, P. (2011). A neglected aspect of the housing market the caretakers of Peri-urban Accra, Ghana. *Urban Studies*, *48*(4), 793-810.
[62] UN-Habitat (2003). Rental housing: An essential option for the urban poor in developing countries. *Nairobi: UN HABITAT*.
[63] Tipple, A.G. and Willis, K.G., (1991), "Tenure choice in a West African city", *Third World Planning Review,* vol. 13, pp. 27-46.
[64] *Rental Housing: A Much Neglected Housing Option for the Poor*.

A.6. Few governments have directly addressed housing informality

Despite the ubiquity of self-built informal housing in SSA, there is often limited policy support for it. There are four main ways that governments respond to housing informality in the region, ranging from hostility to active support:

- ***Informal housing is actively opposed.*** Informal housing developments may interfere with newly planned development. For example Ethiopia's government-owned but informally-built *kebele* housing is being actively cleared, especially in the capital, and replaced by modern condominium apartments which are not affordable to the same residents. The displacement forces *kebele* residents to find alternative housing in other parts of the city, often the urban fringe, contributing to further urban expansion.

- ***Informal housing is ignored or tolerated.*** Some countries have an ambivalent approach to informal housing whereby limited infrastructure occurs, but often slowly, sporadically or with the purpose of garnering political support from residents. For example, in Zambia, peripheral squatter areas became important areas for cultivating votes for political office and consequently, few were cleared.[65] Governments can also implicitly legitimize illegal settlements when they retrofit basic infrastructure such as roads, drainage, electricity, and water for these communities, as in the case of Nigeria. In Ethiopia, residents further seek to project an image of permanence and stability by building steel gates and corrugated iron fences around their property. Each of these measures raises the perceived costs and risks for governments intervening to remove or resettle people in these areas in the future.

- ***Informal housing is recognized and addressed positively.*** A number of governments are beginning to recognize the potential in self-built housing and to work with the reality of informality. For example, Angola has made self-built housing the focal point of its "one million houses programme," initiated in 2008; 68 percent of the houses are slated to be built under self-help initiatives, in which the government provides families serviced and legalized land. However, the program's output has been sluggish because the government is having trouble providing secure land to the many residents that do not even qualify for a subsidized mortgage.[66] Similarly, the Central African Republic government used to impose a fine US$100 to those building without a proper unit, but modified the regulation in 2008 with the introduction of a new housing policy that offered technical assistance and waived the fine for households that wanted to self-build.[67]

- ***There is no cohesive policy or strategy for addressing informal housing.*** For example, the Ethiopian government's response to informality is disjointed, vacillating between a laissez-faire approach – where local officials will even play an unofficial role in informal land allocation – and a forcible slum-clearing approach, where residents are often poorly compensated.

Effective policy responses to informal housing are constrained by the pervasive lack of data on the issue. The supply and quality of informal housing stock is not well-documented or understood. National construction statistics only include information on formal construction, as self-builders do not belong to

[65] UN-Habitat, "Zambia Urban Housing Sector Profile," (2012).
[66] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[67] Ibid.

any association, nor do they pay company or income tax. In this way investment and labor activity involved in informal housing construction is not systematically included in national accounts records.

B. Current government policies have had limited impact on affordable housing provision

Governments have an important role in coordinating the administration of land for managing urban growth and expansion. Property development is capital-intensive, complicated and carries many risks. The land and development sector is also a tremendous driver of national economies and a great deal of aggregate wealth exists in the form of private land and property.[68] Both desirable urban land and development capital are often scarce, and market incentives direct investment to where land can accommodate uses and densities that can derive profit from investment. These dynamics typically will not produce housing for low income groups. However, the location and supply of quality housing have important social consequences and externality effects. Private development in housing increases demand for public services, such as schools and clinics. It also places increased demand on roads and transport networks.

Governments have an important role in helping to provide affordable housing. International experience suggests that the ideal role for governments is to enable the private provision of housing, rather than to provide it directly.[69] There are several reasons for this. First, as this report will demonstrate, housing affordability is influenced by a number of factors over which governments have limited immediate influence such as the cost availability of construction materials and long term finance to cover development and maintenance costs. Second, governments can target housing production to certain beneficiary groups (such as the poor, elderly, or public servants) but they often lack the data to ensure that housing is appropriately targeted to these populations over the long term rather than directed to groups that could otherwise afford privately provided housing.

However, governments can support the function of land and property markets in ways that provide a variety of housing types and tenures. People have many preferences for housing types and sizes as well as tenure (rental versus ownership). Robust housing markets should allow the private sector –whether developers or self-builders to - accommodate a range of preferences and income levels. Government involvement in affordable housing production is now often through the provision programmatic tools and incentives for the private sector in order to soften the cost of of providing units that are below a market rate or which meet public benefit criteria. In principle, these partnerships recognize the relative importance of both public and private sectors in performing specific tasks and allocate responsibilities on the basis of each partner's comparative advantages. For example, governments can provide support for land assembling, access to development finance and also have control how policies and regulatory controls are applied. The private sector tends to have more investment in equipment and expertise for construction, along with the experience and capacity to deliver a housing product to a target market segment rapidly.

[68] For example, more than one third of all total private wealth among households in Britain is in form of housing (Collier and Venables 2013).
[69] Examples include public housing in the United States and the HLM in France.

B.1. Government subsidies do not effectively address the need for affordable housing and fail to engage the private sector.

Governments have several options to improve the private provision of affordable housing. These "housing affordability tools" or HATs can be directed to three areas: 1) subsidies for reducing the cost to build or operate housing; 2) reducing the cost of purchasing or occupying a house; and 3) to individuals, developers, NGOs, and other stakeholders that are involved in housing delivery. HATs include grants and subsidized loans to target groups in order to reduce the cost of housing. They could also take the form of indirect subsidies such as public investments in trunk infrastructure (which frees developers from paying for it) and improving access to developer finance. Table XX below outlines the main 16 HATs that can improve the private provision of affordable housing. A more detailed description can be found in *Appendix 4. 16 Housing Affordability Tools.*

Table XX. Housing Affordability Tools (HATs)

Non-Cash	***Cash***
Land	Grants
Zoning and density	Hard debt with high gearing/leverage
Trunk infrastructure	Hard debt with internal subsidy
Site infrastructure	Soft debt
Inexpensive/free utilities	Hard equity
Credit enhancement	Soft equity
Tax relief (VAT, Sales)	Operating subsidy
Ongoing real estate tax abatements	Redirective subsidy

However, SSA governments have had limited success in using these tools to improve affordability. Though all of these tools are employed to varying degrees in SSA, governments in the region largely tend to encourage housing production with trunk infrastructure provision and offering hard debt with internal subsidy. The latter refers to the practice of lending money at a below market interest rate and subsequently "taking a loss" compared to the conventional alternative. This can be supply-side (loan to developer to build or buy materials or land) or demand-side (loan to home buyer). However, most governments in SSA tend to offer the supply side subsidy. Box XX details various subsidy programs in the region.[70,71]

The lack of development finance limits private sector contributions to housing investment. Nearly half of all businesses in SSA cite lack of access to finance as a major constraining factor, with smaller firms disproportionately being affected. On average, only 22 percent of firms in SSA hold a loan or line of credit.[72] Only 4.3 percent of SSA has public registry coverage and 5.9 percent private bureau coverage.[73] The low coverage of registry means that only a small portion of the population – even businesses - have access to credit for investment. The lack of access to credit presents barriers to the abilities of both

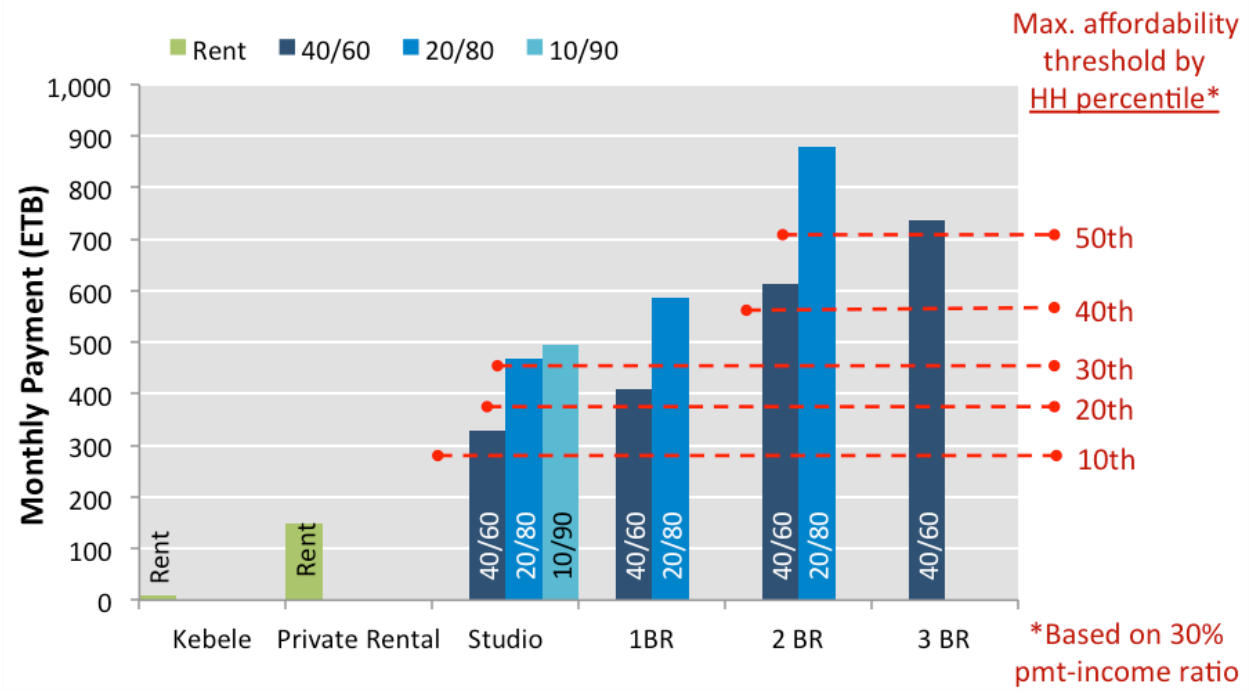
[70] For future research, a systematic categorization of each SSA country and the extent to which governments and other benefactors (notably, DFIs) use each of the 16 housing affordability tools would be an invaluable resource for further understanding the housing sector in SSA.

[71] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[72] Thouraya Triki and Issa Faye. "Financial Inclusion in Africa" (Tunisia: African Development Bank, 2013).
[73] "Doing Business: Measuring Business Regulations" (World Bank, 2013), http://www.doingbusiness.org/.

developers and contractors to participate in housing development, much less affordable housing development where risks are likely to be higher and returns are smaller. Rather than capital markets, government and foreign investment is the most common source of finance for housing and infrastructure. Governments owned 56 percent of the 322 new infrastructure[74] projects in progress in 2013, while private, foreign investors (mostly in the US and Europe) owned 39 percent and 4 percent were held in joint public-private ownership.[75] Governments are also highly dependent on debt funding from development finance institutions for these projects (about 36 percent of all funding in the continent).

Government programs that subsidize housing still do not meet affordability criteria. In Ethiopia, government policies have discouraged the involvement of the private and non-profit sector. The Ethiopian government currently shoulders most of the burden of housing delivery for the middle and lower class, while Ethiopian developers mainly work on high-end projects. These developers have very little incentive to do otherwise. Ethiopia's Integrated Housing Development Program is a government subsidy program that began in 2005 with the goal of improving the affordability of housing. However, the least expensive unit remains out of reach for most of the target population. Figure 8 shows that the bottom third of income groups cannot afford the lowest cost apartment, unless they choose a small unit with a down payment of 40 percent. Three bedroom units are outside affordability thresholds for half of income earners.

Figure 8. Housing Affordability of IHDP in Addis Ababa, Ethiopia (2014)



[74] Top sectors include: energy, transportation, mining, real estate, water, oil and gas.
[75] "Deloitte on Africa: African Construction Trends Report 2013" (Deloitte, 2013), http://www.deloitte.com/assets/Dcom-Kenya/Local%20Assets/Documents/Deloitte%20Africa%20ConstructionTrends.pdf.

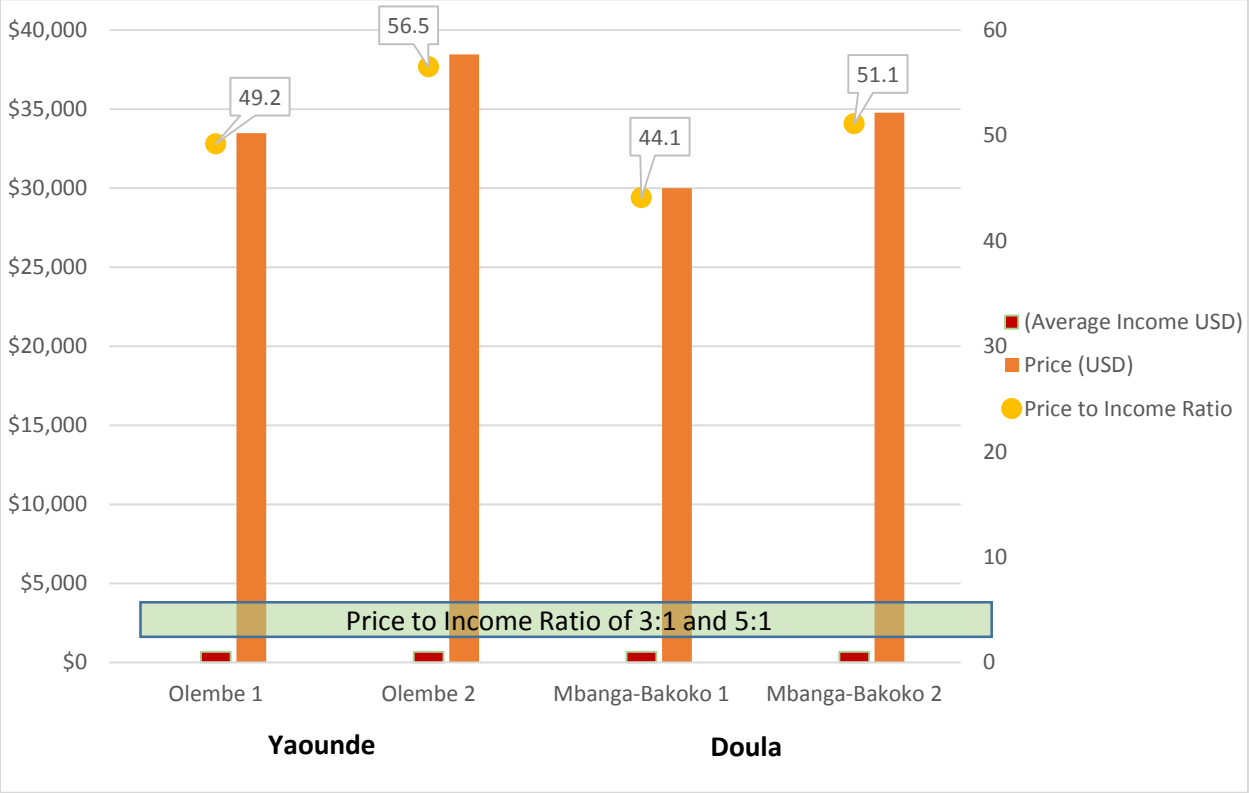
A common means of providing affordable housing used to be direct government provision. However, most governments have been moving away from this approach for reasons of targeting and cost efficiency. Direct government provision of housing, particularly for the public sector and middle class, was common during the independence period of the 1960s, though funding was soon depleted. The provision of core housing was followed by assisted sites and services, then un-assisted sites and services, and ultimately reduced to basic sites and services.[76] As squatter settlements grew to dominate cities, governments tried to improve the existing housing stock through direct investments, but the scale necessary to keep up with the urban growth was rarely achieved. International housing policy shifted in the 1990s toward an "enabling" approach, outlined in the UN-Habitat's Global Strategy for Shelter to the Year 2000. This approach calls for governments to facilitate the housing development efforts of households and private markets by providing a supportive legal, regulatory, and financial environment.[77]

Public housing remains unaffordable even when directly provided by governments. In 2009, the government of Cameroon allocated USD$50.1 million to fund the Government Program of Construction of 10,000 Social Housing Units and Development of 50,000 Buildable Plots. Despite the ambitious targets, only 1,175 units have been built as of 2015. However, 80 percent of Cameroon's population cannot afford these social housing units. Figure 9 shows that in conventional affordability terms, these units are far outside of the typical price-to-income range of between 3:1 and 5:1; with prices 44-51 times typical income levels. Indeed, even for public employees, price-to-income ranges for homes in these developments range between 10.5-13.5 mean incomes, or two to three times affordability thresholds.

Nigeria has also dedicated significant resources to public housing investment and has not met its production targets. The Federal Housing Authority was created in 1973 and charged with producing housing in order to meet a growing need according to several National Development Plans that have aimed to supply 261,000 units. However, by 2012 the authority has only constructed 41,000 units or about 15 percent of its goal (FHA 2014). Since 1991, the government has adopted a housing policy that encourages private sector participation by offering discounted land and development finance. However, rather than encourage the production of housing, these subsidies served to encourage land speculation in major cities where high value land was acquired for little or no cost. Development agreements with local governments were either ignored or not enforced and, in the case of Abuja, any housing that was built was directed toward middle and upper income groups in order to maximize investment returns (Abdullahi and Aziz 2010).

[76] UN-Habitat, "Affordable Land and Housing in Africa," (Kenya: UN-Habitat, 2011).
[77] Enabling Shelter Strategies – World Bank.

Figure 9. House price to income ratios for government social housing program in Cameroon



(Source: Cameroon Country Case Study)

Box XX: Examples of subsidy programs in SSA

- Mali offers a generous subsidy program that allows beneficiaries to receive a direct subsidy of up to 45 percent of the cost of a housing unit, including the cost of land. Members of housing cooperatives also receive a subsidized interest rate (7-11%).
- The Mauritius Housing Corporation offers a Government Sponsored Loan (GSL) with a maximum of US$10,585 with a 25 year term, where up to 20 percent of the loan can be a governmental grant. Beneficiaries need a regular savings track record and a monthly income must be US$365. Further, the Housing Corporation partners with the National Housing Development Company by providing construction finance for NHDC's subsidy program, in which eligible beneficiaries can apply for land to build on and receive technical assistance in the form of free prototype plans and subsidized architectural services. Those who make no more than US$5,000 a month can receive grants up to US$1,800 to buy building materials. On the supply side, the government also offers incentives to developers in return for developing residential units, of which 25 percent in any individual development must be reserved for low-cost units at a fixed sale price.
- In Djibouti, the government is seeking to encourage foreign investment in housing development by offering tax and import duty concessions and fast track permit permissions to willing firms.
- Under Kenya's newest housing bill, the government has committed to allocating 5 percent to housing and infrastructure development throughout the country. Under this, US$114 million will be channeled to the National Housing Development Fund on an annual basis, and a guaranteed mortgage scheme will be implemented to increase lending.
- Senegal's "One Family, One Roof" Initiative provides free housing and land, tax breaks, and other subsidies for homebuyers that purchase housing costing less than US$15,000.
- The Botswana government has funded a locally implemented Self-Help Housing Agency (SHHA), which provides plots and construction finance to low-income citizens for self-build. SHHA's beneficiaries can choose between a completed US$6744 house along with a zero-interest, 20 year loan, or a US$5058 home improvement loan (also zero-interest, 20 year term). In 2013, the government allocated US$6.9 million for the SSHA homes program (1,000 beneficiaries) and US$2.23 million for SHHA loans program (444 beneficiaries).

Parastatal housing organizations also limit private sector activity in housing development. Tanzania's National Housing Corporation (NHC) began in 1962 as a government agency with the mission of providing universal housing access. Over the next ten years NHC built approximately 11,000 units and acquired 8,500 others through seizures of vacant properties. This competition discouraged private investment in the housing sector for years, an effect that was magnified when NHC housing production fell off in 1973 following budget cuts (Komu 2011). NHC became a parastatal organization in 1990 and subsequently has become a housing developer that competes with the private sector.[78] However, the NHC has an advantage because of the legal powers it has to "acquire parcels of land and service them" as "master developer" (NHC 2010) which it can accomplish through access to public funds. The NHC also has now focused on developing market rate housing, with a typical unit price of USD$20,000. While these units are less expensive than those build by private sector competitors, they remain too expensive for the poor and instead are targeted to middle and upper income groups .

[78] Cote D'Ivoire's public housing authorities underwent a similar evolution from public agency to state-owned enterprise over the same period. Housing production and affordability outcomes mirrored the experience of Tanzania (World Bank CIV Urbanization Review; Rakodi 1997)

Housing subsidies suffer from weak design and targeting. In general, government subsidies are not effective in expanding affordable housing in SSA for four reasons. First, they may be too small to significantly improve a beneficiary's ability to purchase or rent based on market conditions. This is the case in Cameroon, where the government's flagship social housing program is unaffordable by 80 percent of the population. Second, supply-side programs may use subsidies inefficiently. Third, housing subsidy programs may privilege a single major city's housing needs (as in Zambia, Ethiopia, Lesotho and Liberia) or a specific housing tenure type (such as homeownership vs. renting) as is the case in Ghana.[79] Fourth,

Box XX: Informal Settlement Upgrading and Housing Improvement in Mauritania

The population of growth of Nouakchott, Mauritania reflects the same trends occurring in other Sub Saharan African cities. Since 2000, the population of the city grew 25 percent, to more than 700,000, about half of which are estimated to live in informal settlements, or *kebbe*. In 2000, the government, with assistance of the World Bank, began an upgrading program to improve living conditions and housing quality in slums of 11 regional capitals, including the largest *kebbe* in Nouakchott, El Mina (which had a total of 40,000 households).

El Mina was populated by the city's poorest residents; estimated average incomes were about $USD0.50 per day. Housing consisted of temporary dwellings built of wood and scavenged materials. The community lacked public streets, lighting or electricity and drainage. Water was expensive (USD$ 7/m^3) and supplied by trucks and ambulatory vendors. Schools and health facilities were also absent and the lack of planning prohibited the circulation of emergency and waste collection vehicles.

Under the program, *kebbe* residents were eligible to receive a serviced plot in an upgraded site less than 1km away, along with microcredit loans for home improvement and due compensation for their existing property, provided they agreed to resettle at a nearby location. All plots in the new location would be less than 150 meters from a paved public road and a water tap. The new site also featured community buildings with latrines and a drainage system. Residents received legally-recognized plots of 120m^2 and access to subsidized credit to build a 20m^2 cinder block house. The loan terms were USD$160 down payment and a required payment of USD$10 per month for three years. Many households used their compensation to purchase the credit, while others rebuilt their previous homes on their new plots. In this way, the program allowed residents options in housing provision; actively supporting incremental and self-help approaches. A 2007 survey of residents found that a majority of respondents reported an improvement in housing conditions (71 percent), access to transport (62 percent) and community cohesion (80 percent).

The project demonstrates the role that governments can have in improving access to quality housing without being a direct provider. Rather, the government subsidies were directed to poor households in the form of secure land plots, community infrastructure and support for credit. The USD$ 95.5 million investment project directly improved a number of areas in the housing sector across Mauritania. Infrastructure upgrading, and tenure security improvements - like in the El Mina case - benefited 181,000 people. Additionally, the investment enhanced or created a total of 225,000 jobs and provided technical assistance to community organizations and NGOs to scale up and continue work for services and construction.

Sources:

World Bank 2014 Urban Land Acquisition and Involuntary Resettlement: Linking Innovation and Local Benefits

World Bank 2013. Implementation Completion and Results Report no. ICR1359, Urban Development Project.

[79] In Ghana, subsidies are used to encourage poor renters to become owners of single family houses, rather than owners of their apartments.

subsidies for private developers to build low-income units may simply be used to supply additional housing to upper-income groups, as is the case in Ghana.[80] Finally, there is limited government coordination with private sector actors, which could otherwise improve the scalability of subsidies[81] and reduce the crowding out of private sector housing investment.

There is not a single solution to improving the targeting of housing subsidies. Rather, a better understanding of particular country contexts and housing delivery value chains is needed to better assess the type and role for subsidy intervention. Public resources are limited and, where possible, need to be directed to where they may have the greatest impact in catalyzing affordability. The direct provision of subsidized housing by governments tends to neither be cost effective nor well targeted to those who need it. This is because government housing suppliers are constrained by the same barriers such as materials and construction costs that limit the overall housing delivery system. As an enabler of housing markets, government interventions should target the weakest link in either the supply or demand value chains. In doing so it should also initiate private sector involvement in order to spur competition and consumer choice.

[80] For example, tax exemptions and import benefits are directed to a group of estate developers (GREDA) who build exclusively for the middle- and high-income groups.[80] In many other countries, policies that purport to target the lower-income brackets actually focus on the middle-income brackets, often due to inadequate market assessments and targeting criteria (UN Habitat 2011; Ghana Housing Profile)

[81] For example, Ethiopia's IHDP program, while reducing costs through economies of scale and out-sourcing of components, still produces a relatively expensive housing product. In spite of the subsidy, the high cost of the units is still too great for many households.

Box XX: South Africa's Housing Subsidy Experience

Compared with the rest of SSA, South Africa is the economic powerhouse, with much better developed and more extensive infrastructure grid. These make the case of South Africa difficult to extrapolate to other countries in the region, though its regional economic and cultural dominance creates opportunities to apply South African lessons to nearby countries, especially Namibia and Botswana.

Support for Private Lending to Low-Income Groups:

South Africa has been successful in targeting subsidies and engaging the private sector in low-income housing delivery by establishing explicit lending criteria for beneficiary groups. The government has been adamant about this priority, and even moved to enact a statutory mandate version of the United States' Community Reinvestment Act[1] for banks. This prompted the banks to voluntarily convene and collectively pledge to a Financial Sector Charter (FSC) in 2003, where they committed capital to certain priority sectors, including affordable housing. Banks promised to make R42 billion in home loans to borrowers in the US$250-1,100 per month income category. As further incentive for participation, the government rates each bank based on the level of committed capital and uses the rating to determine eligibility for other subsidies or regulatory approvals.[1]

The implementation of the Financial Sector Charter has been very successful, as banks exceeded their mandated target and lent R45 billion. Of this, R28 billion was mortgage loans and the rest consisted of pension-secured construction, wholesale finance, and housing microfinance credit. Additionally, analysis of mortgage loan performance in 2013 revealed that the performance of FSC and affordable target market loans were on par with those for higher-income earners. Namibia followed suit and implemented their own financial sector charter in 2009. [1]

Capital Subsidies:

The government's capital subsidy program has supported consumer housing finance for low-income groups since the early 1990s and has contributed to 1.6 million housing starts. The scheme mainly consists of a one-time capital sum given to eligible low-income households. In 1996, the government established the National Housing Finance Corporation (NHFC) to provide wholesale finance for housing intermediaries (banks, non-bank lenders, housing associations) that cater to the low-income market, and NURCHA, a development finance company that provides bridge finance for affordable housing contractors and developers.[1] Lastly, the government's most recent program, introduced in 2012, addresses the gap for those who do not qualify for subsidies but cannot afford the least expensive newly built house. The Finance Linked Individual Subsidy Program, or FLISP, gives buyers a one-time capital contribution of US$8,500-9,760 when they access a mortgage and buy a house under US$29,286. Implementation, however, has been slow, with only 114 applications approved in the first year.[1]

Settlement Upgrading:

The People's Housing Process (PHP) is a government-sponsored initiative to provide subsidy assistance to low-income households for incremental self-help upgrading of informal settlements. The program has encountered difficulties as, according to Shack/Slum Dwellers International it has been reluctant to disburse significant sums to community organizations that manage upgrading plans.[1]

However, there remains more to be done:

Despite the subsidies, affordable housing is still out of reach for many, suggesting the need for other complementary investments**.** Given such an exhaustive network of subsidy schemes, it is unsurprising that, in 2010, 75 percent of the delivery all new houses were subsidized in some way. About 86 percent of the population is eligible for some form of housing subsidy.[1] Despite this, South Africa's housing shortage persists – its current backlog is defined at 2.1 million units, for 1 million households living in informal settlements and 1 million households living in inadequate or overcrowded conditions. As previously discussed, the lack of serviced land and infrastructure backlogs are persistent reasons for higher housing costs and demonstrate that subsidies for housing consumption alone are often not enough.[1]

Box XX: Examples of Public-Private Partnerships for Improving Housing Markets

Streamlining Development Approvals

- In 2007, Cameroon's Ministry of Housing and Urban Development introduced legislation aimed at regulating the property development sector through, among other things, an approval and registration process for real estate developers.[1] In exchange, firms get assistance in land acquisition and support for purchasing locally made construction materials. The reforms have stimulated low cost housing development, as shown by an increase in the registration and licensing of developers, and more projects being implemented by private developers.[1] As of January 2014, there were 74 registered real estate developers and by August there were 87.

Land Assembly and Co-Financing

- Tanzania's National Housing Corporation has developed a PPP investment strategy comprising three distinct models of engagement, depending on the type of development. For prime commercial and residential properties, it offers land as equity. For prime commercial and mixed-use rental properties, it contributes both land and development finance. For residential properties, it adopts a revenue sharing model. The NHC initiated 181 joint ventures, more than 60 percent of which are complete or in progress, up to 2012.[1]

- In Mozambique, the Government initiated a housing program that aimed to build both 100,000 houses and provide 300,000 plots.[1] The policy, however, is designed to engage both the citizens and the private sector in housing development. The Government plans to contribute 20 percent of the stock, the private sector will contribute 30 percent, and the residents will contribute 50 percent via self-construction.[1] In particular, the Government of Mozambique has signed an agreement with a Spanish developer, Grupo San Jose, which will build 4,500 units with a starting price of US$30,000.[1]

Decree No, 2007/1419/PM which laid down the conditions of application Law No. 97/003 of January 10, 1997 on property development.

[1] United Nations, "Cameroon: National report submitted in accordance with paragraph 5 of the annex to Human Rights Council resolution 16/21," *Human Rights Council Working Group on the Universal Periodic Review Sixteenth session Geneva, 22 April–3 May 2013* (2013).

[1] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[1] Ibid.
[1] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[1] Ibid.
[1] "President Reshuffles Government" (Mozambique News Agency, October 16, 2012), http://www.poptel.org.uk/mozambique-news/newsletter/aim452.pdf.

4. Supply Issues and Affordability

Housing affordability is constrained by challenges with key supply inputs. These inputs begin with the cost and time necessary for obtaining, transferring and developing land for residential use. Second, network infrastructure, such as roads, power, piped water, sewage/drainage and so forth to service residential land is lacking and very expensive to build retroactively in settlements that lack such connections. Most SSA countries also lack the institutions and capacities to capture land value in ways that can be used for these types of investments. Finally, the cost of building the dwelling is very high due to the cost of construction materials (such as cement) and the lack of a robust construction sector.

This section outlines the key issues of housing delivery from the supply side in the region. The costs that each of these factors impose reduces the supply of land, constrains access to infrastructure and (by extension) the availability of finished, quality housing units for purchase. The scarcity of these inputs drives up the cost of formal housing for all residents, and leaves the majority of low-income groups with informal shelter that is lower quality and may be without secure tenure.

A. Access to land, affordability of land, and security of tenure drive overall housing affordability in SSA.

Tenure systems often do not support the emergence of land markets. This is because in many areas land is subject to tenure regimes that limit the ability of markets to circulate land or to define and protect development rights. These issues, however, are particularly complicated owing to the array of different tenure systems both across the region and within individual countries, as well as the general lack of a consolidated, efficient land administration system in many countries.[82] [83] For example, customary tenure may only allow land to be acquired or transferred only with the consent of a local tribal council or leader. [84] In other countries, such as Ethiopia, the government has sole control of all land and has ultimate control on land administration issues. Where land is expensive to acquire or where tenure rights are difficult to obtain and protect, housing costs will be high.

As with housing, the region has formal and informal land markets. UN-HABITAT (2010) defines the "informal" land market as including a "variety of urban land transactions, exchanges and transfers that are not recognize by the state as legal, but which are nevertheless socially accepted as legitimate by a variety of urban actors."(pg. 21)[85] Moreover, the informal land market in SSA has a significant number of market transactions that "are mediated more by social relationships than by a financial logic."(pg. 22) The boundary between these two markets is not always clear, because what counts as "formal" varies among and within countries.

Land rights derive from a plurality of authorities and may often be in conflict with one another. Rights to land in Africa can stem from multiple sources: first settlement rights, conquest, government allocation, "land to the tiller" policies, and market transactions. Moreover, these rights may be validated by a number

[82] Land administration refers to the rights afforded by different tenure categories, the development rights afforded to land, the procedures required to obtain and transfer land as well as any system of fees or taxes enacted to capture value from land.
[83] UN-HABITAT 2010,
[84] Camilla Toulmin, "Securing land and property rights in Sub-Saharan Africa: the role of local institutions," (Switzerland: World Economic Forum, 2005).
[85] UN Habitat 2010.

of local and state authorities: community councils, local government, tribal leaderships, land agencies, and more.

The two main tenure regimes are derived from common law and customary law systems. Many countries in Africa recognize both common law tenure (freehold or leasehold) and customary law tenure, though in a number of countries the latter is treated as secondary to the former. Customary law tenure, which is derived from traditional systems of tribal land-holding, tends to treat land as collectively owned, making it difficult to sell and or collateralize on the open market.[86] In a number of SSA countries, such as Mozambique, Angola, Ethiopia and Zambia, much of the land is state-owned, meaning that residents can sell property and other improvements on the land, but not the land itself.[87] Urban land markets in Africa, both formal and informal, tend to be small by international standards.[88] There is evidence, however, that the informal market for peri-urban land is growing and land prices are rising.[89] As cities grow, the demand to convert customary agricultural land for urban uses – either through formal or informal means – will be a source of political and social conflict.

Customary land holding norms are often so important to social cohesion that they are protected in the constitution of many countries. Even where they have officially been superseded by state control (e.g., in Nigeria, Ethiopia, Lesotho, urban areas in Zambia and Malawi), customary land-holders have great influence on who resides in their area of jurisdiction even though they exercise no legal rights. In Lesotho, all land was nationalized in 1979, but chiefs still issue backdated leases. In Nigeria, land officially belongs to the state, but land-holding communities are more likely to sell their land informally than to await government compensation. In Ghana, land-holding chiefs have maintained their rights and have become major players in urban land allocation and control. There, customary land holding is seen as both progressive and egalitarian, with built-in checks and balances in contrast to overly bureaucratic and corrupt 'modern' systems.[90] Informal land holding may also be more gender-sensitive, privileging widows' or orphans' rights over extended family claims, as is the case in Malawi.[91]

The limited market circulation of land directly influences the housing finance market. In a market economy, land is less liquid than other assets. Customary tenure reduces the liquidity of land even further. In Ghana, for example, even where a household has secure leasehold rights of use on their land, it is not likely to be used as collateral because households are reluctant to risk losing it.[92] Across the continent in Kenya, only 23.7 percent of the population is willing to use their home as collateral for borrowing.[93] In addition, many of the customary land transactions are not arms-length. Thus, even though customary law may provide secure tenure, the land could not be accepted as collateral by a bank because its repossession would be fraught with difficulty. This would add to the time and cost necessary for the bank to dispose of the land in order to recover the loss of the loan. This is the case among housing microfinance officials in

[86] "UN-Habitat 2010."
[87] This arrangement can still allow for an effective land market to exist if there are long-term secure leases on the land.
[88] "UN-Habitat 2010."
[89] Ibid.
[90] Kasanga, R.K., J. Chochranc, R. King and M. Roth. 1996. Land markets and legal contradictions in the peri-urban area of Accra, Ghana: Informant interviews and secondary data investigations. Land Tenure Centre Paper 127. Madison, WI: Land Tenure Centre, University of Wisconsin-Madison; Kumasi: Land Administration Research Centre, University of Science and Technology.
[91] *Malawi Urban Housing Sector Profile*.
[92] Anecdotally, there is evidence that a program to fit VIP toilets in housing in Kumasi in the 1980s was less successful than hoped because house-owners were reluctant to borrow even a small amount against their house.
[93] World Bank, *Developing Kenya's Mortgage Market* (World Bank, 2011).

Ethiopia, who will do anything they can to avoid repossessing land if there is a loan default.[94] Even where there is a clear foreclosure process, as in the case of Tanzania, jurisdiction may be ambiguous and therefore banks don't trust the collateral value.[95] In Mozambique, while traditional authorities are effective in administering tenure rights, it remains difficult to use such land to secure mortgages.[96]

A.1. The plurality of tenure systems, even within a single country, complicates access to land

The relationship between common and customary land law is ambiguous in many countries. Customary land rights, which are controlled by a system of typically unwritten customary laws that are administered through the hierarchy of a social or political unit,[97] dominate the land systems of many SSA countries. For example, in Malawi, 90 percent of the land is customary land, although there are no legal documents specifying what this means, so land falls under dispute and cannot be easily collateralized.[98] Similarly, in Botswana, 71 percent of the land is held under tribal control.[99] Most land in Swaziland, even in peri-urban areas, is considered "Swazi Nation Land," held by tribes; converting such land requires the consent of the king and rarely occurs.

Parallel systems of land administration cause complications in tenure security and establishment of development rights. For instance, Cameroon is a bi-jural state as it inherited foreign systems from both French and British colonial administrations. Consequently, these two different legal systems operate concurrently in different parts of the country along with a customary system. In Cameroon, most land is still held under customary tenure arrangements and administered by traditional rulers. In Douala, an estimated 80-94 percent of land transactions take place under this system.[100] In Mali, Selod et al. (2015) identify three parallel systems of land delivery in Bamako, each with different gradations of formality and security of tenure. While the law allows for customary land in Bamako to be converted for agricultural use, in practice it is acquired exclusively for residential development on the urban fringe.

A.2. Governments struggle to establish consolidated, efficient land administration systems, despite promising reforms made in recent years.

Land administration systems do not adequately record tenure claims nor support formal land markets. The principal obstacles to improved land governance in SSA are land grabs from agro-investors, land vulnerability in terms of poor documentation, inefficient land administration, a lack of transparency, and low capacity and demand for professional land surveyors.[101] The limited circulation of land discourages investment and ultimately makes land for housing more difficult to secure. In SSA, tenure systems that afford ambiguous or unevenly administered rights and protections to land holders distort the price and availability of land. Governments play a key role in recording and protecting ownership claims and in managing public lands in fair and transparent ways.

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[94] Interview with Addis Credit and Savings Institution, 2014.
[95] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[96] Ibid.
[97] World Bank, *Developing Kenya's Mortgage Market*.
[98] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[99] Ibid.
[100] Dr. Gilbert Baluba, Chief of Planning in the Department of \Housing, Lands and Urban Planning of the Douala Commune, cited in Sandra Belaunde et al., "Land, Legitimacy and Governance in Cameroon," (Paris: Institute for Research and Debate on Governance, 2010).
[101] Frank Byamugisha, *Securing Africa's Land for Shared Prosperity* (The World Bank, 2013), http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2013/05/31/000445729_20130531122716/Rendered/PDF/780850PUB0EPI00LIC00pubdate05024013.pdf.

Clear documentation of land is a rarity in SSA. Only 10 percent of total land in SSA is registered.[102,103] In West Africa, land registration is even less common; only 2-3 percent of land is held with government registered title.[104] Less than less than 10 percent of the land in Yaounde, Cameroon bears a title deed.[105] Similarly, in Djibouti-ville, Djibouti, only 30 percent has formal land title, while 25 percent hold Permits of Provisional Occupation.[106] Part of the low level of registration may be due to the cumbersome and expensive land registration and transfer systems which are loaded with survey expenses and fees, rendering registration unaffordable and challenging for many.[107]Many African governments utilize local registration databases, as they do not have the capacity to set up a central system, but this decentralization renders the process more vulnerable to capture by local elites.[108] Paper-based systems and deeds registries (rather than land registries) break down during conflicts as evidence of land title is lost by owners. Post-conflict restoration is complex, expensive, and may become socially divisive as those who have developed land stand to lose it to earlier owners whose claims might be tenuous. Deeds are also relatively simple to forge, as in the case of Liberia.[109]

[102] Ibid.
[103] "Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises" (World Bank, October 29, 2013), http://www.doingbusiness.org/reports/global-reports/doing-business-2014.
[104] Camilla Toulmin, "Securing land and property rights in Sub-Saharan Africa: the role of local institutions," (Switzerland: World Economic Forum, 2005).
[105] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[106] Ibid.
[107] Camilla Toulmin, "Securing Land and Property Rights in Sub-Saharan Afrca: The Role of Local Institutions" (Switzerland, 2005).
[108] ibid.
[109] UN-Habitat, "Liberia Housing Profile," (Forthcoming).

Box XX: Transparency in Public Land Management: The Case of Nigeria

Nigeria exemplifies how land administration is prone to inefficiency and a lack of transparency. At the state level, limited capacity and a lack of transparency often impedes land development. The states own land, but the mechanisms for generating revenue from land are underdeveloped or undermined by complex local tenure arrangements and lack of property registration. As such, a number of state governments harbor little interest or ability to use land value capture to address the housing and infrastructure needs of the urban poor because they have neither the regulatory tools or incentives to do so.

Urban land owned by the offices of specific title holders, such as Presidents and state governors, raises questions of transparency.[1] Such land can be distributed as gifts to individuals and organizations, which makes public land susceptible to use for patronage and political reward rather than for public benefit. Reducing governors' control over land supply, particularly in urban areas, is proving a huge challenge for the national legislators, with too little progress made towards a proposed Land Use Amendment Act.[1] Nigeria has laws specifying that rent charged for occupying state-owned land should be used for community investments. This is currently set at a very low rate, and mostly it is not collected, as most properties are not registered with a Certificate of Occupancy. Many agencies are attempting to address this problem with land information systems and land registration programs, but these improvements take a long time during which significant revenue may be foregone.

Finally, the uneven implementation of the 1978 Land Use Act (LUA) appears to encourage unplanned and informal expansion in urban areas. Land allocation procedures are not well known and subject to capture by local elites and special interests who can use the law for their benefit. The LUA provisions also limit the compensation for compulsorily acquired land to a "cost" estimate rather than a market valuation, which distorts land and property markets in areas that may be subject to government land acquisition for public use.

[1] British Colonial "crown land" was transformed into the virtually personal property of the head of state. Crown land is, in fact, governed by Parliament in the British Constitutional Monarchy.

Box XX: Steps in the Right Direction for Improving Land Administration

Improving the reach of land registries:

- Since 2005, Rwanda has implemented comprehensive land-tenure reform that has shown early success. From 2005-2012, Rwanda implemented its nationwide program to issue land titles based on photomapping technology at a cost of less than US$10 per parcel. Madagascar, Namibia, and Tanzania are currently undertaking similar efforts.[1]
- Tanzania has surveyed all of its communal lands and registered 60 percent of them at a cost of $500 per village. Ghana and Mozambique have begun to follow Tanzania's example.[1]
- Ethiopia issued certificates for 20 million parcels of land at less than US$1 per parcel and mapped them onto a cadastral index map at less than US$5 per parcel in 2003-2005.[1]

Streamlining Registration Procedures:

- In 2009, Kenya adopted a new land policy that strives to streamline land administration processes by reducing the stamp duty from 25 to 5 percent of the principal amount; providing VAT exemptions for developments with more than 20 low cost units; and reducing the tax on mortgages from 0.2 to 0.1 percent.[1]
- The introduction of Lesotho's Land Administration Authority in 2012 has significantly improved land registration in the country by reducing wait times and improving application turnaround. It also has gained general support from land-holding communities.[1]
- Computerizing land records and registration systems helped significantly cut the number of days to transfer property for Ghana (169 to 34) and Uganda (227 to 48).[1]

[1] Byamugisha, *Securing Africa's Land for Shared Prosperity*.

[1] Ibid.

[1] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.

[1] Johnson, S. and Matela, M. (2011) 'Reforming Land Administration in Lesotho: Rebuilding the Institutions', [Online]. Available at: www.landadministration.co.uk/Documents/PN-32%Reforming%20Land%20Administration%20%in%20Lesotho.pdf

[1] Byamugisha, *Securing Africa's Land for Shared Prosperity*.

[1] Ibid.

Box XX: Options for Improving Tenure Security for Informally Settled Populations

- In 2012, Namibia passed the Flexible Land Tenure Act, which allows communities to obtain blocks of multiple plots and a "starter title" that grants perpetual occupancy and transfer rights. This Act is aimed at the 30 percent of Namibian residents that live in informal settlements.[1] Residents can also apply for full, mortgageable land titles. Upon receipt of title, the communities are responsible for upgrading the site infrastructure. The legislation has been regarded as innovative in its recognition of incremental tenure and building methodology.[1]
- In 2011, Senegal passed a new Land Tenure Act under which those with temporary occupancy permits in urban areas can convert the permits into permanent title deeds at no cost. Improved tenure security further helps increase housing investment and improvement, access to housing finance, and the activity of the formal land market.
- Kenya, Lesotho, and Tanzania are utilizing bulk surveying and land use planning approaches to regularize tenure in slums.[1]

[1] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[1] Byamugisha, *Securing Africa's Land for Shared Prosperity*.

A.3. Planning regulations can increase the cost of formal housing.

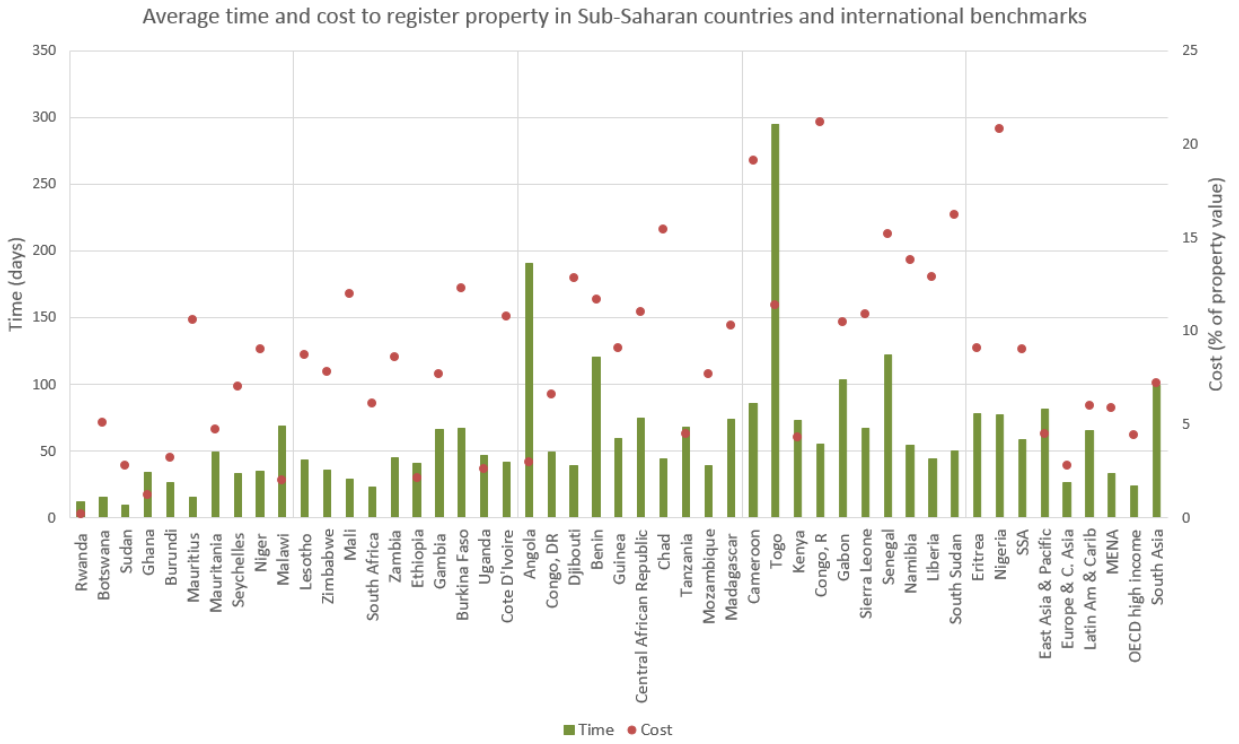
Regulations of building material types, property registration, construction permits, minimum lot sizes, and density can unnecessarily add to the cost of construction. This encourages the creation of informal housing and leads to inefficient urban spatial development. Many governments often insist on using formal building technologies that may not be locally sourced, cost-effective, or sustainable.[110] In addition to the darker prospects of corruption, this is also driven by outdated building regulations that are material-specific rather than performance-based. This is the case for Ethiopia, and many other SSA countries, in that such regulations lengthen approval time for each new material, limiting the use of readily available local materials which are proven to be durable and safe when used properly. Local building materials, though capable of high performance standards,[111] are often regarded as unworthy of urban use and outlawed from the formal sector.

Obtaining property registration and construction permits in SSA is more costly than in other regions. Registering property in SSA is generally more time consuming and costly (relative to property value) than in other regions of the world, while dealing with construction permits is fairly quick but still costly (relative to income per capita). **Error! Reference source not found.**~~Figure 15~~, below, depicts the average time and cost to register property[112] in Sub-Saharan countries and international benchmarks. The overall mean for

[110] UN-Habitat, "Affordable Land and Housing in Africa," (Kenya: UN-Habitat, 2011).
[111] John Norton, *Building With Earth: A Handbook* (London: Intermediate Technology Publications, Ltd., 1997).
[112] Assumptions are that the buyer and seller are LLCs in a peri-urban area, and the property is fully owned by the seller, is free of title disputes or attached mortgages, and consists of 6,000 sq ft of land and 10,000 sq ft building.

SSA is 58.9 days and 9% of property value, which is over twice that of Europe/Central Asia (26.5 days and 2.8% of property value) and OECD high-income countries (24.1 days and 4.4% of property value). While SSA does not rank the highest among regions for number of days to register property, it does entail the highest cost as a percent of property value. **Error! Reference source not found.**~~Figure 16~~ displays the international rankings of each SSA country for ease of registering property. Rwanda ranks highest at 8, with Botswana and Sudan in second at 41. Nigeria ranks the lowest at 185.

Figure 10~~15~~. Average time and cost to register property in Sub-Saharan African countries and international benchmarks



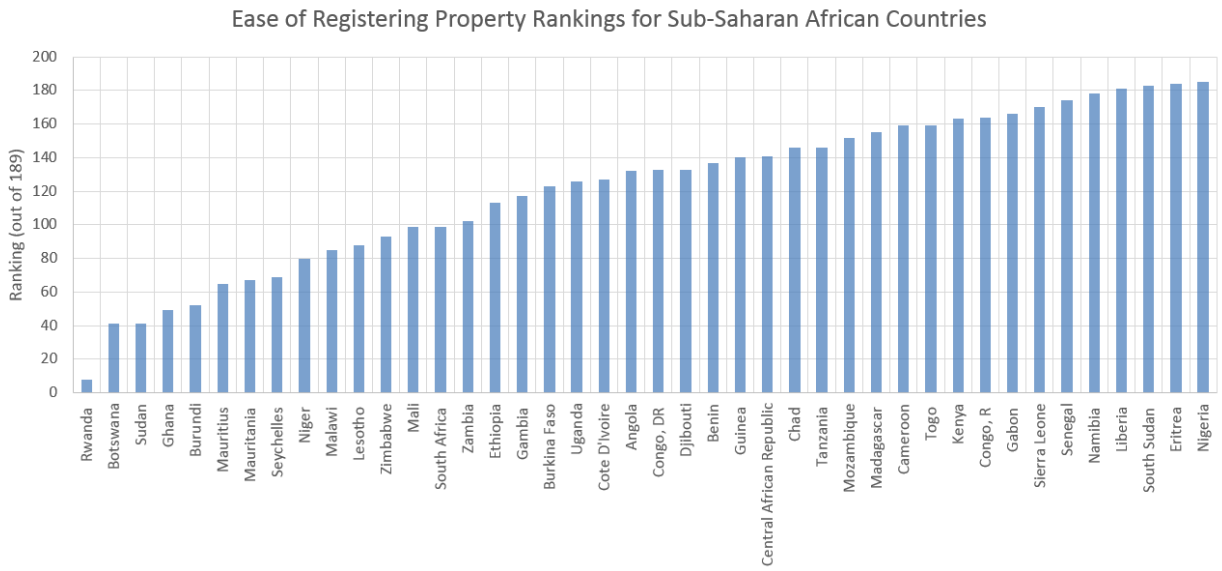
(Source: Generated using data from Doing Business 2013, International Finance Corporation)

Policymakers have taken steps to reduce costs and streamline procedures for property registration. Among all regions, SSA implemented the most reforms to improve the ease of registering property in 2012/2013. Burundi made the biggest strides among all countries worldwide, by creating a one-stop shop for property registration that consolidated the activities of the municipality, the revenue authority, and land registry. Guinea-Bissau opened notary offices to handle property transactions; Lesotho eliminated ministerial approval on property transactions and hired new staff at the registry; Uganda introduced an

No special natural or historical protections. Not intended for residential use, and no occupants assumed. These assumptions are for commercial, rather than residential purposes, but the findings still reveal much about the general state of property registration systems in these countries. In fact, the magnitude of the issue for residential systems may be understated, as residential processes may take longer and cost more as a percent of property value, especially if there is any informality involved.

online stamp duty certification system to save time; Cape Verde and Liberia digitized their land registries; and Guinea and Senegal both lowered their transfer taxes by five percentage points.[113]

Figure 11~~16~~. Ease of Registering Property Rankings for Sub-Saharan African Countries



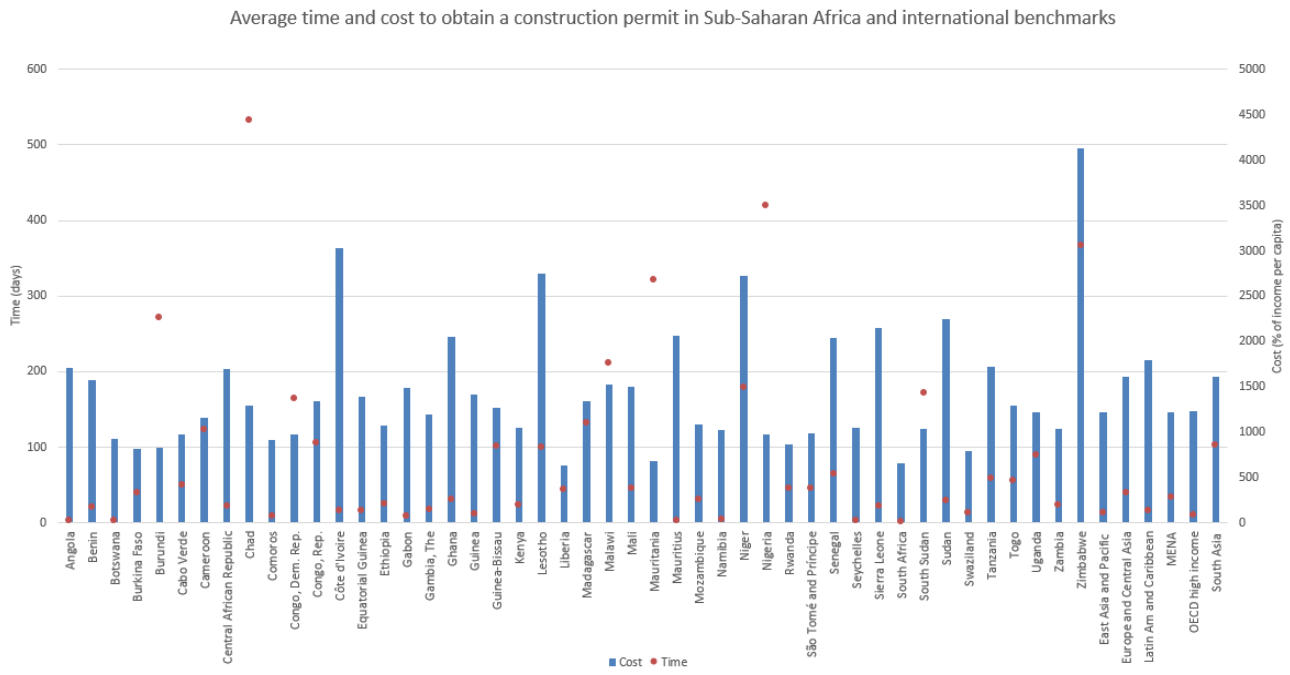
(Source: Generated using data from Doing Business 2013, International Finance Corporation)

The high costs of construction permits discourage informal developers from obtaining them. **Error! Reference source not found.**~~Figure 17~~ shows the average time and cost to obtain a construction permit in Sub-Saharan Africa.[114] The overall mean for SSA is 171.1 days and 736.8 percent of income per capita. SSA's average time is comparable to other regions, and lower than that of South Asia, Latin America/Caribbean, and Europe/Central Asia. However, its average cost is second only to South Asia, and nearly 9 times the percentage of the OECD high-income countries (84.1 percent of income per capita).

[113] "Doing Business 2014: Understanding Regulations for Small and Medium-Size Enterprises."

[114] Assumptions are that the construction company is a fully licensed domestic LLC and owns the land on which the warehouse is built. The warehouse itself will be used for general storage activities, two stories, located in a peri-urban area, built on land free of title disputes, has complete architectural/technical plans, is connected to water/sewer/telephone and will take 30 weeks to construct. These assumptions are for commercial, rather than residential purposes, but the findings still reveal much about the general state of property registration systems in these countries. In fact, the magnitude of the issue for residential systems may be understated, as residential processes may take longer and cost more as a percent of property value, especially if there is any informality involved.

Figure 12~~17~~. Average time and cost to obtain a construction permit in Sub-Saharan Africa and international benchmarks



(Source: Generated using data from Doing Business 2013, International Finance Corporation)

Minimum lot sizes in Africa tend to be high. Large plot sizes increase the cost of infrastructure provision and reduce urban density. It can also discourage private investment in housing where land costs and floor to area (FAR) ratios make such projects financially unfeasible. **Error! Reference source not found.**~~Table 7~~ compares minimum lot sizes for residential plots across five SSA countries. In each case, lot sizes for high density uses are a fraction the size of low density minimums; in Malawi sites and service neighborhoods have standards that permit 26 times more density than is allowed in low-density minimum standards. Such large lots may be affordable in rural areas where land is inexpensive and agriculture is an important subsistence strategy, but such large lots in urban areas inevitably contribute to low density expansion and increased infrastructure costs when coupled with high population growth.

Table 4~~7~~. Minimum plot sizes for residential uses (m^2)

	Ghana*	Liberia	Malawi	Zambia	Lesotho
Low density/High cost	1,880	1,012	5-6,000	1,350	1,000
Medium density/Medium cost	N/A	506	1-2,000	540	N/A
High density/ Low cost	350	253	225†	288	375

* Low density plots in Tesano CFC estate and the minimum legal plot size

† Minimum in Traditional Housing Areas, Malawi's very successful version of 'sites and services' neighborhoods

(Source: Generated using data from UN-HABITAT Housing Sector Profiles)

Large lot sizes increase the price of obtaining land and housing in urban areas. In Kigali, Rwanda, the inner-city is being rezoned into larger plots (250 m^2 to 1,000 m^2) and multi-family residential, which is driving low-income households and informal home construction to the edges of the city. As there is no serviced land at the periphery, this exacerbates the vulnerability of these populations. Strict density

regulations, particularly in city centers, also negatively effects mobility. Low density can result in large welfare costs of 3-6 percent of average household consumption or more due to longer commute times and energy wasted through poor building design and incomplete or poor infrastructure connections.[115] Such unrealistic building and land regulations encourage the growth of an informal sector because the cost of compliance is much greater than the negative consequences of informality.[116] Ethiopia's experience with local development plans suggests that graduated or context-specific standards, particularly in the smaller cities, towns, and peripheral areas, can offer greater affordability.

A.4. Conclusion

Complete and accurate tenure and cadaster records support investment in and exchange of land and property. Multiple tenure systems limit the scope of markets to value and exchange land according to price signals. This is exacerbated where permissions to obtain, transfer or retain land are given arbitrarily and without transparency. The inability to provide a discrete and objectively verifiable boundary for a piece of real estate property in much of SSA represents a major obstacle to the use of mortgage finance as a form of security to enable capital to flow into residential property. However, throughout the world, there is ample evidence that occupancy, use, and ownership of land was bought and sold and traded before there were formal title deeds, plats and surveys, or cadasters – and in such cases the registration and record came later.[117] Recent reforms in a number of countries in the region also demonstrate that land administration reforms can both improve the quality of land registries and streamline the procedures required to obtain or transfer land.

Yet there remain significant challenges to implementing land reforms, especially in urban areas. Satellite and GPS technologies are promising tools to lower the cost of completing accurate land registries. However, in urban areas where there is a concentration of land and buildings and a large volume of property transactions, accurate cadaster and registry systems may take many years to complete. To make land work for housing investment, it may be worth exploring alternatives using a non-cadastral form of registration or documentation of economic ownership could be the basis for a collateral-based or partially-collateralized form of formal or semi-formal finance. Second, land administration reforms also require complementary changes in legal and professional institutions. This includes regulations (clarity of transfer procedures and rights), surveying records and procedures (cadaster and other forms of official record ownership), state institutions (e.g. title registries), professional intermediaries (e.g. notaries, attorneys), financial risk mitigation (e.g. title insurance), and governance (e.g. proper enforcement of entitlement, foreclosure, and eviction laws applicable to an individual country). Each of these require an important and informed government involvement.

The time and costs required to meet construction and development standards encourages informal developers to avoid meeting them. This arises partly because the enabling environment – laws, regulations – is structured on the implicit assumption that property is formal and building codes must apply to all forms of construction, and the result is per-activity costs that render smaller formal housing unaffordable while smaller informal housing is affordable. The cost and availability of quality construction

[115] Robert M. Buckley and Jerry Kalarickal, "Shelter Strategies for the Urban Poor: Idiosyncratic and Successful, but Hardly Mysterious," (World Bank, 2004).
[116] Paul Collier and Anthony J. Venables, "Housing and Urbanization in Africa: Unleashing a Formal Market Process," (Oxford: Centre for the Study of African Economies, 2013).
[117] Such as the US's Homestead Act of 1862, which enabled squatters to gain formal title to land through an adverse possession approach; if they lived on it continuously for five years, improved the land with a structure.

materials is also a major impediment to reducing housing costs. There are few local production sources for high quality construction materials and government and private sector developers tend to prefer imported materials. Imported materials ultimately increase the cost of housing for consumers, which in turn perpetuates the housing affordability gap as both self-builders cannot afford materials necessary to meet standards and developers must include the cost of materials in the final price of a complete house, which raises the price. The lack of skilled architects, construction managers and laborers reduces the quality and consistency of the housing stock and limits the potential to develop economies of scale in housing development.

B. Infrastructure provision is scarce and lags behind housing development.

Cities are attractive for people and investment because of how they use agglomeration and economies of scale. The density and diversity of urban areas improves economic gains and enhances the frequency and variety of social interactions. The spatial proximity also makes the provision of infrastructure cost-effective for governments and beneficial for local economies. Infrastructure is the broad term for all the physical or systems support for urban economy and society, and includes (a) aggregation of clean water, (b) sanitation and removal of human waste, (c) maintained roads[118] plus higher-volume modes (e.g. trains, streetcars), (d) non-revenue social amenities (e.g. parks), (e) power supplies (especially electricity), and (f) extended-coverage networks that run the infrastructure from its place of origin or collection (reservoir, landfill, hub, power plant) throughout the city. These networks can expand efficiently when marginal cost to include an additional beneficiary is low.

Infrastructure is under-supplied in poor and informal settlements. In SSA, such infrastructure is scarce. Regionally, less than 40 percent of all households have access to piped water, and the dearth of these amenities is particularly acute in rural regions.[119] The infrastructure gap in Africa is greater than that of low-income countries elsewhere, especially when it comes to paved roads, phone mainlines, and power generation capacity (**Figure 13**~~Figure 10~~).[120] Infrastructure has high upfront capital costs, which governments often cannot afford. Public investments in infrastructure are often directed to those with land title and formal homes, such as those built by social housing programs or large private developers. Experience with sites and services programs meant to benefit the poor finds that infrastructure investments drive land speculation and eventual displacement, by middle- and upper-income groups, of lower-income groups that such interventions were intended to help.

Land is seldom used as a means to finance capital investments in infrastructure. In many cities acorss the world, local governments accommodate urban growth through the use of various land value capture instruments such as fees and property taxes to pay for service provision. Yet in SSA, most cities lack the capacity to use land as a source of revenue, either through laws that prohibit or minimize land fees or taxation. Even if such laws were in place, weak fiscal cadaster records and capacities and a reliance on transfers from central government authorities reduce the ability and incentives for cities to leverage land for these purposes.

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[118] The first roads are simply paths or lines of convenience that are geodesic across the urban terrain. Unmaintained roads arise naturally because they are efficient for everyone. Maintaining a road – grading, drainage, paving, and so on – is what distinguishes the purely private path from transportation infrastructure.

[119] Nancy Lozano-Gracia and Cheryl Young, "Housing Consumption and Urbanization," (Forthcoming).

[120] Vivien Foster, "Overhauling the Engine of Growth: Infrastructure in Africa" (World Bank, September 2008), http://siteresources.worldbank.org/EXTPRAL/Resources/africa_country_diagnostic.pdf.

Figure 13~~10~~. Africa's infrastructure deficit

Table 1 Africa's infrastructure deficit

Normalized units	Sub-Saharan Africa LICs	Other low-income countries
Paved road density	31	134
Total road density	137	211
Mainline density	10	78
Mobile density	55	76
Internet density	2	3
Generation capacity	37	326
Electricity coverage	16	41
Improved water	60	72
Improved sanitation	34	51

Source: Yepes and others, 2008.

Note: Road density is in kilometers per kilometer squared; telephone density is in lines per thousand population; generation capacity is in megawatts per million population; electricity, water and sanitation coverage are in percentage of population.

LIC = low-income country.

(Source: Foster 2008)

Across the region, recent data suggests that infrastructure coverage overall is actually *declining.* In 2010, when the urban population reached 37 percent, only 34 percent of urban residents had access to piped water, down from 43 percent in 1990.[121] In many of the larger SSA cities, up to around 1950, developed areas tended to be fully serviced. However, as these cities rapidly grew in the pre- and post-independence period, service provision fell behind development, particularly in the informal areas. In these areas, houses are often built before the plot is hooked up to water, electricity, and sanitation. The sequence of infrastructure planning and investment in informal settlements is the opposite of that in wealthier neighborhoods. The formal process of *plan-service-build-occupy* is reversed into *occupy-build-service-plan*.[122] Infrastructure coverage in SSA is mostly the preserve of upper classes, although coverage is not universal among the affluent. For the poorest 60 percent, coverage is less than 10 percent for most infrastructure services (Figure 14~~Figure 11~~).

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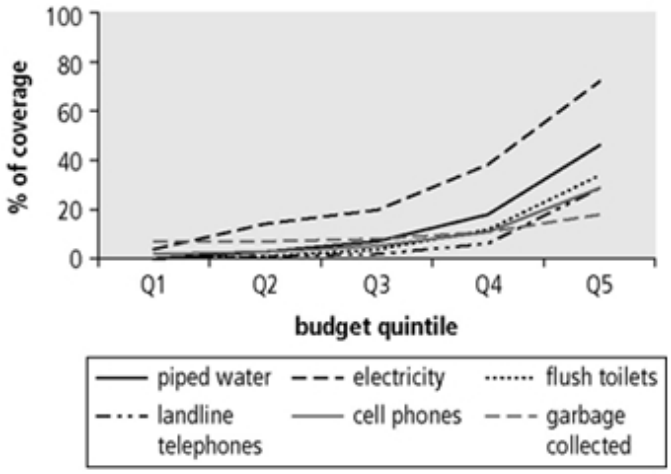
The cost of extending services to developed informal areas can increase the price of housing. Even in formal development, services are often promised for when development begins, but may take months or years before actual implementation. Such infrastructure costs are passed directly onto the household, which decreases overall affordability. In some countries, such as Zimbabwe, government regulations restrict building until the site is connected to public services. While well-intentioned, such regulations are unrealistic and costly, and fail to address the deeper issue of weak service delivery.

[121] Progress on drinking water and sanitation, 2012 update (UNICEF/WHO)

[122] Paul Baross et al., "Land supply for low-income housing: issues and approaches," *Regional Development Dialogue*, 8 (1987): 29-45.

Figure 14~~11~~. Infrastructure service coverage by budget quintile in SSA



Source: Banerjee, Wodon, and others 2008.
Note: The data are the latest available as of 2006.

(Source: African Infrastructure Knowledge Program 2011)

Infrastructure development in SSA has struggled to keep pace with urbanization in recent decades.[123] Since 1990, the growth in coverage of household services in both rural and urban areas throughout SSA has been stagnant. The low population density of rural areas leads to high infrastructure costs: a basic service package costs US$400 per capita. While a basic package in urban areas costs half as much, urban areas must cope with rapid population growth, currently at a yearly average of 3.6 percent. Given current trends, it is predicted that most SSA countries won't achieve universal access for another 50 years.[124] In a recent World Bank study, 7 out of 13 SSA countries in a sample of household budget surveys saw increases in infrastructure shortages. One notable exception was Uganda, which saw a 55.7 percent improvement in infrastructure shortages, particularly in drinking water and sanitation.[125] Infrastructure shortages persist even as per capita national income increases, indicating that even high resource countries find it

[123] Nancy Lozano-Gracia and Cheryl Young, "Housing Consumption and Urbanization," (Forthcoming).
[124] "The Africa Infrastructure Knowledge Program" (African Development Bank Group, 2011), http://www.infrastructureafrica.org/.
[125] Nancy Lozano-Gracia and Cheryl Young, *Housing Consumption and Urbanization* (Draft Report, The World Bank, 2014).

difficult to provide basic services. For example, in South Africa, infrastructure blockages are one of the reasons housing shortages persist despite generous government subsidies.[126]

The level and type of infrastructure deficiencies vary by sub-region. For example, eastern Africa suffers most from overcrowded conditions, dirt floors, and lack of access to sanitation, but has the highest percentage of electrical connections. Western Africa has the highest housing shortages and deficiencies, while Central Africa faces the lowest housing shortages, but also low electricity connections. Further, the willingness of households to pay for various basic services varies across cities. For example, in Dar es Salaam, Tanzania, households will pay around US$159 for an improved toilet facility; in Kigali, Rwanda, they'll pay US$159, and in Abidjian, Cote d'Ivoire, they'll pay as much as US$601.[127]

Additionally, the cost of infrastructure connections in SSA is high by global standards.[128] For example in 2013, the cost for connecting a single warehouse to a power supply in SSA was US$38,500, which was the highest in the world (Figure 15~~Figure 12~~). South Asia had the lowest cost, at US$19,112.

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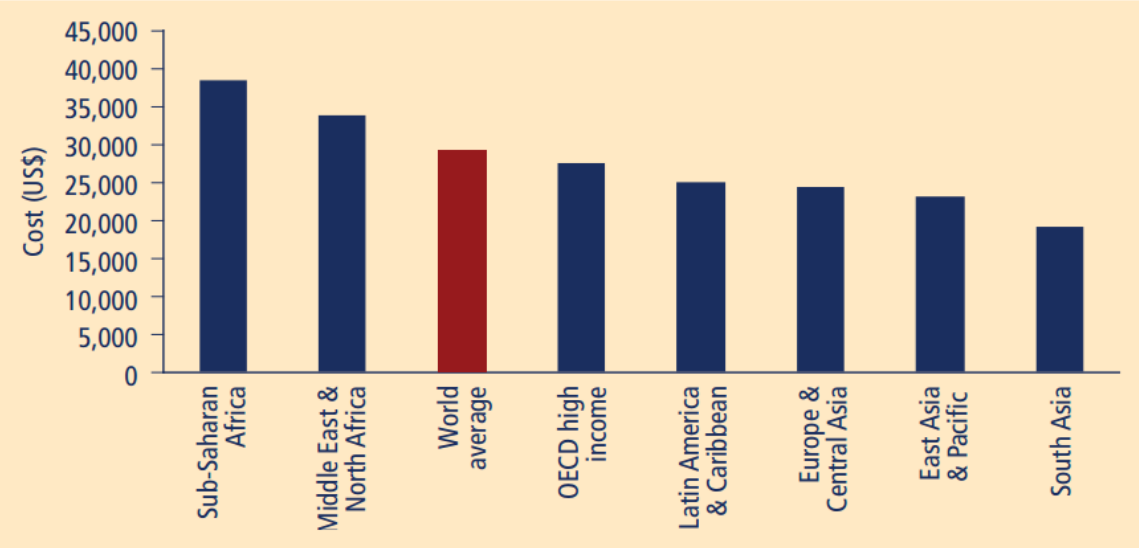
Figure 15~~12~~. Average cost to connect to electricity for businesses by region



Source: Doing Business database.

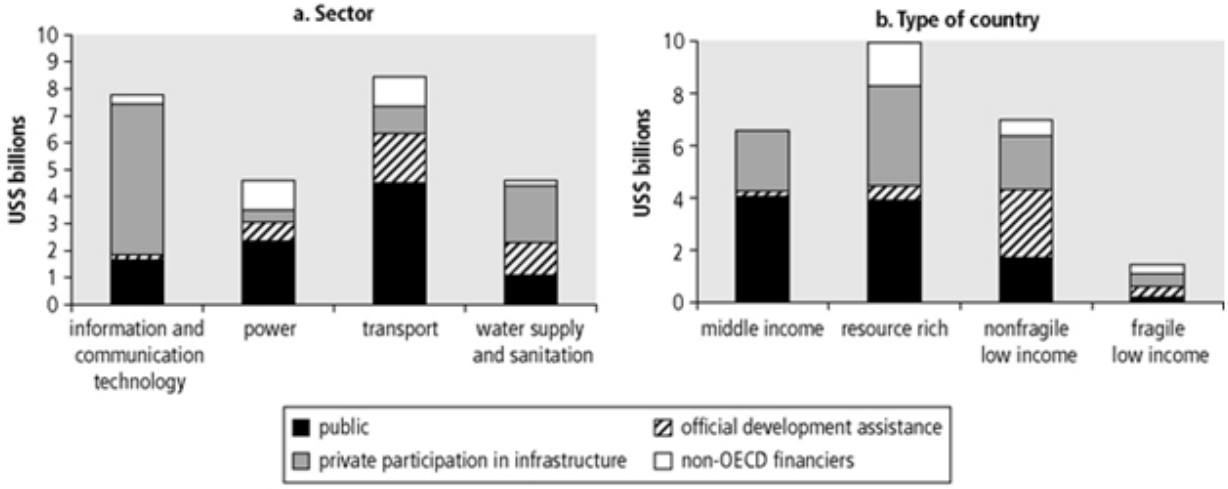
(Source: Doing Business 2014 Report)

Overall, the Africa Infrastructure Country Diagnostic (AICD) estimates that an annual investment of US$93 billion over the next 10 years will be needed to close the infrastructure gap with other regions and meet its stated development; water supply and sanitation alone will require US$21.9 billion a year.[129] Currently, Africa invests US$45 billion a year in infrastructure, two thirds of which originate from taxes and user charges. Roads and water tend to be financed via development aid from Organization of Economic Cooperation and Development (OECD) countries. Private financing concentrates on information and

[126] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[127] Ibid.
[128] Foster, "Overhauling the Engine of Growth: Infrastructure in Africa."
[129] "The Africa Infrastructure Knowledge Program."

communication technology, in countries that are middle-income or resource rich, as it seeks the highest and safest returns. Fragile low-income countries receive little financing from any source.[130]

Figure 16~~13~~. Sources of financing for capital investment in infrastructure in Africa



Sources: Africa Infrastructure Country Diagnostic (AICD); Briceño-Garmendia, Smits, and Foster 2008 for public spending; PPIAF 2008 for private flows; Foster and others 2008 for non-OECD financiers.

(Source: Africa Infrastructure Knowledge Program 2011)

In SSA, the public sector usually oversees infrastructure development. Since infrastructure is a welfare good, governments often price-control service providers, making the business unprofitable and unattractive to the private sector. The quality of public sector infrastructure provision has been mixed, as governments in SSA often do not coordinate these basic services as part of long term urban planning.[131] Instead, infrastructure building is primarily project-driven, especially where foreign investment is being made.

Overall, it is estimated that Africa's infrastructure providers waste US$7.5 billion a year, in the following ways: overstaffing (usually in state-owned enterprises), distribution losses due to poor network

[130] Ibid.

[131] Michael Kihato, "Infrastructure and Housing Finance: Exploring the Issues in Africa," (Centre for Affordable Housing Finance in Africa, 2012).

maintenance, revenue under-collection due to social and political impediments to service disconnection, and deferred maintenance leading to excess capital spending on reconstructing existing assets.[132]

B. 1 Conclusion

Infrastructure is a key component for encouraging housing investment and improving the quality of life in informal settlements. However, in many parts of urban SSA, the development of land often long precedes the extension of infrastructure and public services to informal settlements. The pattern of urban growth is: (1) economic expansion; (2) immigration (usually rural to urban); (3) an increase in informal housing and demand for services; (4) overload of the established infrastructure grids; and (5) the continued expansion of informal areas beyond the grid footprint. Infrastructure extension to these areas then proceeds incrementally through connecting households nearest the grid and slowly moving outward. The retroactive extension of network infrastructure connections to these areas can be both disruptive to residents and expensive for governments.

Infrastructure has both high establishment costs and high network-effect value. However, these costs should be considered alongside the immediate and long term alternative costs borne by residents in informal settlements. For example, they must rely on alternatives such as trucks or kiosks for water, which are often more expensive than piped water tariffs, a lack of adequate sewage and drainage systems which increases the risks of contamination and flooding. Given the expenses of alternative sources of water and power evidence suggests that infrastructure provision in low-income communities is a supply, rather than a demand issue. Cities should not seek to stop immigration or urban growth, but rather plan to accommodate expansion by establishing public rights of way for future roads and trunk infrastructure and allow informal settlements establish connections to trunk lines through targeted subsidies.

Extending infrastructure to informal settlements requires a clear understanding of local priorities. It is also important to engage civil society and stakeholder groups in order to better understand local needs and to refine potential beneficiaries of subsidies and targeted investments. This would consist of a sequence of (1) land and household enumeration, (2) household registration and establishment of street addresses, mail and other services, (3) extension of grid networks so as to encourage community-level pooling and rationalization of wiring, pipes, and neighborhood alley paving, and (4) periodic public investment in the retrofitting of limited municipal infrastructure. This approach, in line with parallel land administration and urban planning interventions, would provide a foundation for larger scale infrastructure upgrades in informal settlements.

Governments can play a role in developing targeted subsidies and supporting private sector involvement in infrastructure provision. On the institutional side, governments can prioritize infrastructure investments to low-income and service-deficient informal settlements (such as subsidies for hookup costs) using explicit targeting criteria. Similarly, coordination between local and national governments can improve the system of transfers or fiscal autonomy for using tax revenue in order to invest in service delivery based on these criteria. They can also support the diversification of service delivery channels by reforming the governance and activity scope of state-owned enterprises in order to promote more competition and private sector participation. This can include the use of incentive-based performance contracts and public-private partnerships leveraging subsidies to stimulate private capital investments. A system of external audits with published results can ensure transparency in each of these areas.

[132] "The Africa Infrastructure Knowledge Program."

C. The cost of formal construction is high relative to household incomes.

In SSA, the cost of formal construction is high relative to household incomes, due to factors like the high cost of formal building materials and inefficient building regulations and processes. Buildings that are delivered by the formal construction sector and meet all applicable planning and permitting standards are much less common than those built informally. Instead, the informal building materials and construction sector dominates home construction. Most homes are self-built or built by informal contractors from inexpensive traditional materials, do not meet formal building standards, and are constructed incrementally over extended periods of time.

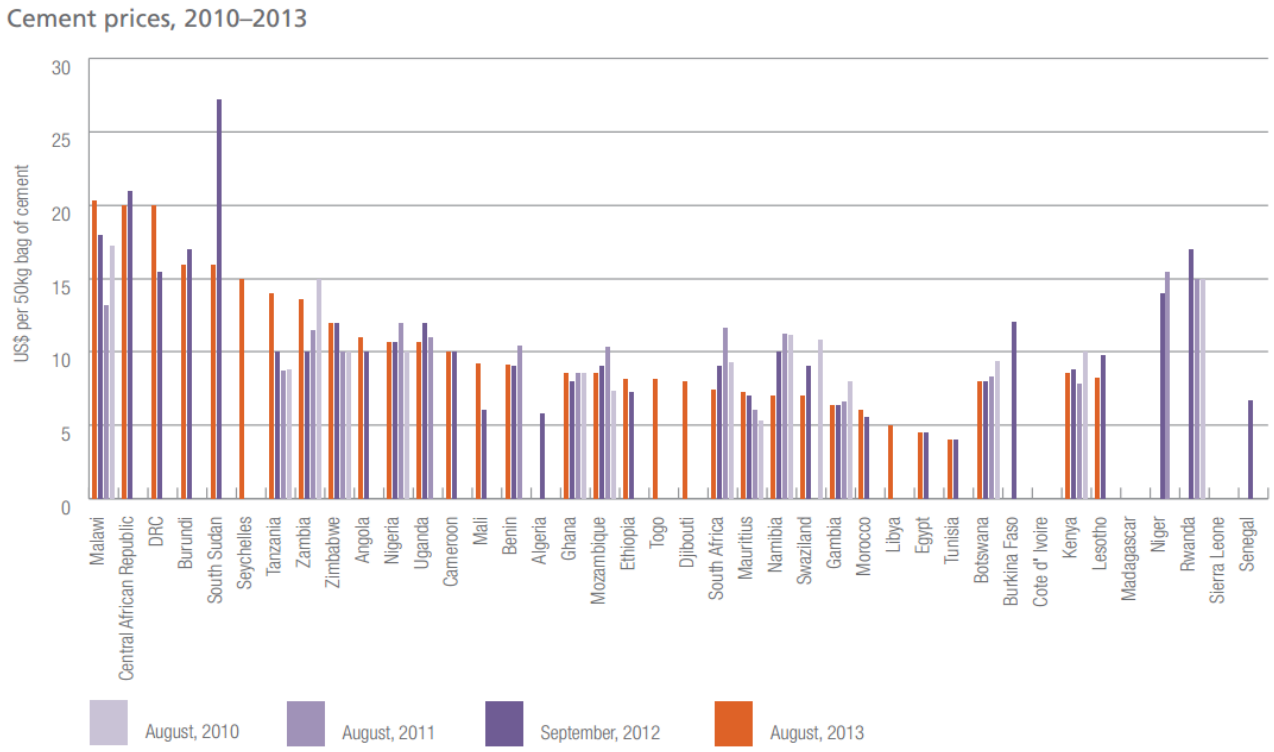
C.1. The cost of formal building materials is high relative to household incomes, and many homes are thus constructed from "informal" materials.

The scarcity of quality construction materials contribute significantly to the high cost of housing. A key obstacle to closing the gap is the high cost of standardized construction materials, which can easily add up to 80 percent of the value of a house in the region.[133] This is owing to a dysfunctional building materials industry that suffers from poor productivity, low diversification, and limited technological capacity.[134] Competition, especially on the domestic front, is low but concentrated, which makes the barriers to entry too high for new firms. Many countries opt to import materials despite the existence of domestic resources, which distorts the local market by raising prices for substitute materials that might otherwise be less expensive to produce locally.[135]

For example, while the cement industry is growing in response to these market pressures, costs still vary widely from country to country. Varying infrastructure and domestic production capacities may be a factor; countries with less developed roads and less established domestic cement industries will naturally face higher prices.[136] Furthermore, cement companies' dependence on fuel imports for power generation renders them vulnerable to the rise and fall of international energy prices.[137] In Nigeria, power generation accounts for 70 percent of production costs; the price of a 50 kilogram bag of cement is US$10, double the price of that in the United States.[138]

[133] UN-Habitat, "Affordable Land and Housing in Africa," (Kenya: UN-Habitat, 2011).
[134] Ibid.
[135] Paul Collier and Anthony J. Venables, "Housing and Urbanization in Africa: Unleashing a Formal Market Process" (Oxford: Centre for the Study of African Economies, 2013).
[136] CAHF, "2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets," (Parkview: Centre for Affordable Housing Finance in Africa, 2013).
[137] Ecobank. "Middle Africa's cement sector: explosive growth," (2014). http://www.ecobank.com/upload/20140724011129637822cPHHGNvnw6.pdf
[138] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.

Figure 1714. Average price of 50 kg bag of cement in SSA



Source: Cement prices from email surveys in 2010-2013, email from AfriSam, CAHF Research.

Durable materials like cement and new low cost technologies have not reached low-income households. However, even with increasing domestic production capacity, it is not likely that cement or other such durable materials will become the material of choice for most households in SSA. Instead, the majority of SSA homes are currently self-built with materials that may be "temporary" or "traditional" or "semi-permanent." These materials vary in every country, but typically include mud, wood, plants, straw, clay, and sheet metal. Such materials often do not live up to formal building standards, but are inexpensive and abundant and thus form the core of most informal, affordable homes in SSA:

- In Burundi, 70% of homes are built with adobe brick; 30% are covered in tiles and sheets; and 70% are covered in straw and plant leaves.[139]
- Over half of the housing Gambia is built with semi-permanent materials.[140]
- In Kenya, 70% of Nairobi housing is 10 m^2 shacks built with wood, mud, tin sheets, and wattle[141].[142]
- Nearly 40% of Namibians use found materials to build their homes.[143]
- 70% of houses in Uganda are built with temporary building materials.[144]

[139] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[140] Ibid.
[141] Combination of soil, clay, sand, manure, and straw.
[142] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.
[143] Ibid.
[144] Ibid.

- In Malawi, 66% live in traditional housing, 15% live in semi-permanent housing, and 18% live in durable, permanent housing.[145]

While these materials are not preferred by many governments, experience shows that they can be durable in addition to being inexpensive and locally sourced. For example, the ubiquitous termite hills on Zambia's Copperbelt are now being quarried for their fine clay to be burnt into bricks in an informal-sector industry.[146] Recognizing the importance of these materials to the affordable housing sector, Cameroon established a Local Materials Promotion Authority (MIPROMALO) to promote the use of locally manufactured materials that reduce the cost of housing.

C.2. There is a shortage of formally qualified construction firms and tradespeople.

The construction industry in many SSA countries lacks a mid-level supply market. There are a few major companies that are capable of fulfilling large-scale, high-value contracts and thousands of small firms or single artisans, for smaller low cost jobs. However, there are few or no firms in the middle. Smaller firms do not typically receive government contracts, and receive little technical training from the government.[147] Further, much formal construction is done by foreign firms: in 2013, 37 percent of projects were built by US/European contractors, 12 percent by Chinese companies, and the remaining half by various contractors from countries like Japan, South Korea, Brazil, Australia, and South Africa.

The formal and informal construction sectors often draw on the same labor pool. Often, it is difficult to separate informal contractors from other firms involved in housing construction. Formal private contractors are quite likely to draw from the same labor and skills pool as the informal sector. For large jobs, it is not uncommon for firms to go to particular places in the cities where construction labor gathers at the beginning of the day, often presenting their tools as an indication of their skills as carpenters, plasterers, and tilers. Such collaboration indicates that the formal-informal locus is a continuum; firms, artisans and laborers move in and out of formality depending on the job being done. There is also significant crossover between formal and informal actors in government projects for housing and infrastructure,[148] and in a number of cases, such collaboration has been beneficial. For example, Ethiopia's IHDP housing has provided many synergistic opportunities in training and contracts for informal workers to prefabricate lintels, sills, floor joists, and floor slabs, while large contractors assemble the components and cast the concrete frames on site. In Cameroon, the government's engagement of informal sector small scale contractors in the government social housing program, while commendable, has met with mixed results. Many of the contractors have suffered from inadequate technical and financial support and irregular payments for work completed. As a result, construction works on some of the project sites have stalled.

[145] Ibid.
[146] UN-Habitat, "Zambia Urban Housing Sector Profile," (2012).
[147] Graham Tipple, "Regional Assessment of the GSS, 2000: Sub-Saharan Africa," (2012).
[148] UNCHS (Habitat)/ILO, "Shelter provision and employment generation" (Nairobi and Geneva: UNCHS (Habitat) and International Labour Office, 1995).

5. Housing Demand and Access to Finance

Housing is typically the most expensive single item an individual or household will ever purchase. As the previous section detailed, the cost of housing in SSA is influenced by several supply factors that influence the price to consumers. On the demand side, there are few tools to assist households in purchasing finished housing units. Along with the fact that most people have very low incomes, this lack of consumer finance limits how much people can borrow or spend to purchase housing. In contrast to North America and Europe where housing finance is obtained through capital markets, the great majority of the investment for housing in SSA comes from domestic savings.[149]

Even so, commercial banks are limited by comparatively small portfolio of deposits from domestic sources, mostly those from high-income or public sector workers. Due to this, commercial banks lack the ability to access long term sources of finance supplied by capital markets that can be used to develop mortgages, which in turn are not common and are relatively expensive by global standards. The low-income majority of the region, where possible, rely on microfinance, savings groups, family loans or personal savings for housing consumption. The small size of these loans means that most people invest in housing incrementally over time.

A. Most of the SSA population cannot access formal housing finance

Overall financial access in SSA is low, and most financial activity occurs outside of formal institutions. Apart from savings, supplementary sources of commercial finance are needed to purchase a complete home. However, access to financial services in SSA is extremely low. According to the World Bank's Global Findex Database (Figure 18~~Figure 18~~), SSA's financial access is low compared to those of the rest of the world, with the exception of the Middle East and North Africa region.[150] Only 24 percent of the adult population 15 years or older in SSA holds an account at a formal financial institution; this figure is halved for those adults in the bottom 40 percent of income levels. The country by country variation goes from less than 5 percent in the Central African Republic to 80 percent in Mauritius. Moreover, only 5 percent of adults receive a loan from a financial institution in the past year.

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[149] Dasgupta et al. 2014

[150] The MENA's most commonly cited reason for not having an account is religious, as many financial institutions don't have the appropriate structures to accommodate Islamic financial tenets.

Figure 18. Regional comparisons between financial access indicators

	Account at a formal financial institution	Account at formal financial institution, Female	Account at a formal financial institution and bottom 40% income	Saved at a formal financial institution in the past year	Saved with a savings club in the past year	Obtained loan from formal financial institution	Obtained loan from family or friends in the past year
EAP	55%	52%	39%	28%	4%	9%	27%
ECA	45%	40%	36%	7%	1%	8%	28%
LAC	39%	35%	25%	10%	4%	8%	14%
MENA	18%	13%	9%	5%	4%	5%	31%
SA	33%	25%	26%	11%	3%	9%	20%
SSA	**24%**	**21%**	**13%**	**14%**	**19%**	**5%**	**40%**

Note: Developing countries in each region only. All financial information expressed as percentage of population over age 15.

(Source: World Bank Global Findex Database 2012)

Overall, borrowing and saving with formal institutions such as commercial banks is rare in SSA. Instead, alternative forms of borrowing and saving are popular, including remittances, informal loans from friends or family, and the use of community savings clubs. In 2012, 40 percent of adults received a loan from family or friends, and 19 percent saved using a community-based savings club (nearly half of those who reported any savings saved with these clubs). Nine percent of the total population and 39 percent of those with formal accounts used them to send or receive remittances from family. This is particularly common in Botswana, Lesotho, and Swaziland.[151]

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single

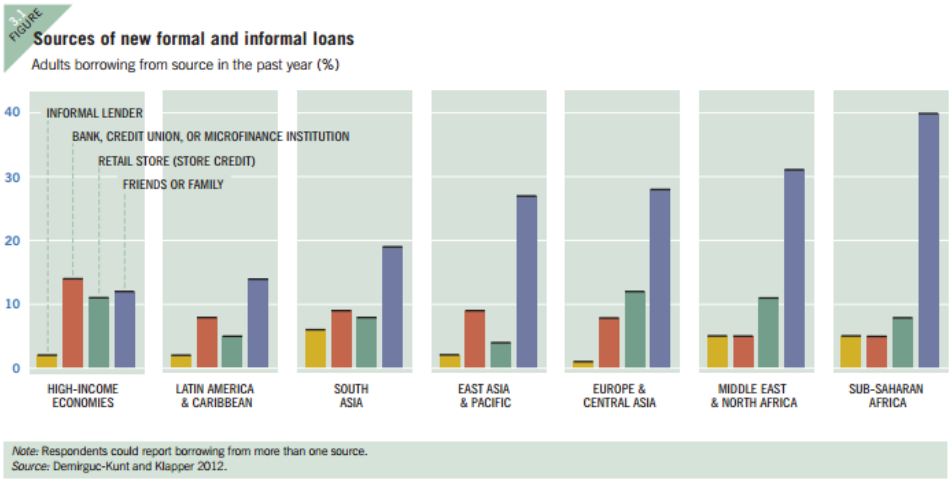
[151] Asli Demirguc-Kunt and Leora Klapper, "Measuring Financial Inclusion: The Global Findex Database" (World Bank, April 2012), http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2012/04/19/000158349_20120419083611/Rendered/PDF/WPS6025.pdf.

Figure 19

~~Figure 19~~ shows, SSA has the highest percentage of adults borrowing from friends or family compared to other parts of the world. There are also significantly higher percentages of informal lending, and relatively lower percentages of lending from formal institutions (bank, credit union, MFI).[152]

[152] Ibid.

Figure 19. Sources of new formal and informal loans in SSA



(Source: World Bank Global Findex Database; Demirguc-Kunt and Klapper 2012)

For more detailed tables from the Global Findex database, please refer to *Appendix 3. Global Findex Financial Inclusion Tables*.

Consumers have three main sources finance for housing. These include microfinance, housing microfinance and mortgages. The following section reviews each of these finance sources and their implications for expanding access to housing. **Error! Reference source not found.**~~Table 9~~ clarifies some of the key differences, showing how housing microfinance – the newest product - draws from elements of both traditional microfinance and commercial mortgage products.[153] Each of these types of finance have strengths and weaknesses for potential use in housing investment. For example, microfinance is typically used for small enterprise development as loan amounts and terms do not permit substantive investment in incremental housing construction. Mortgages on the other hand are aimed at purchasing a complete house, which across the region is not common because of income and collateral requirements.

[153] For example, loan sizes and tenors fall are greater than traditional microfinance, but less than a standard mortgage. It is currently more common for general microfinance loans and institutions to service housing needs as they arise, rather than developing dedicated housing microfinance products. Nonetheless, there is evidence of demand for small loans for housing investment.

Table 5~~9~~. Comparison of Available Finance Options

Product features	*Microfinance*	*Housing Microfinance*	*Mortgage Finance*
Loan (average) [154]	US$500	US$2,500	US$10,000
Tenor	0.25-1.0 year	2-5 years	5-30 years
Purpose	Improve income	Improve housing	Buy formal
Credit decision	Personal	Personal + use	Resale value
Collateral?	None	Partial	Yes; homed

(Source: Affordable Housing Institute)

A.1. SSA's mortgage sector is underdeveloped.

Apart from financial access, formal housing finance activity is also very limited. This is due in part to few savings accounts in commercial banks, which in turn cannot be used to develop mortgage products. Consequently, few households in SSA possess an outstanding loan for home purchase or home construction: 2.0 percent have one for home purchase (3.7% in urban areas), and 4.4 percent of adults have one for home construction (6.0% in urban areas).[155] That home construction loans are twice as popular as home purchase loans is consistent with the prevalence of self-construction in the region. Figure 20~~Figure 20~~ represents outstanding loans for home construction and home purchase in SSA. Chad, Sudan, and Mauritania in particular have high percentages of outstanding loans for both home construction and home purchase. The evidence for SSA's lack of formal housing finance is clear: 85 percent of Africa's urban population lacks access to formal housing loans[156] and only three percent of the population is eligible for a conventional mortgage.[157] Mortgages account for less than 10 percent of the region's GDP,[158] and account for an even lower share when exceptional countries like South Africa, Namibia, and Cape Verde are excluded (Figure 21~~Figure 21~~). While mortgage markets are growing, they still constitute a small part of these countries' economies. Nigeria's mortgage market grew up from $342 million in 2006 to $1.42 billion in 2011, but only accounts for 0.5 percent of GDP.[159]

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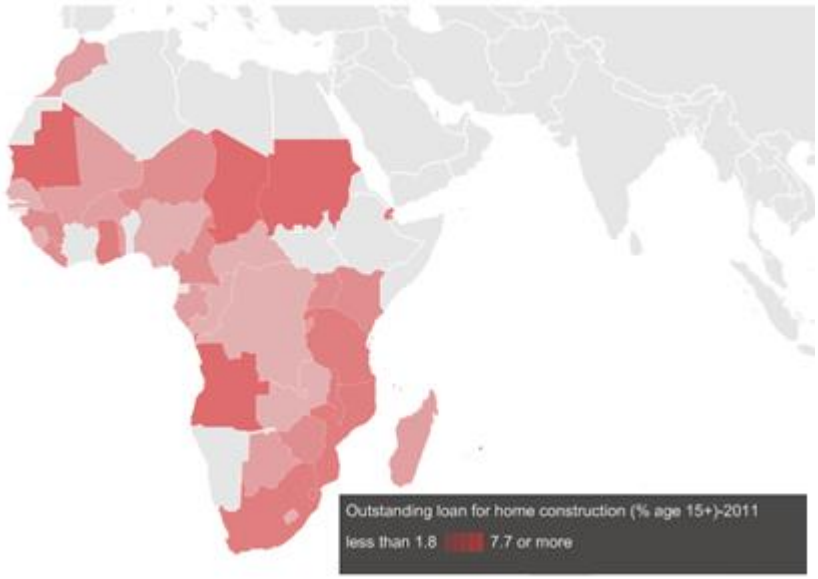
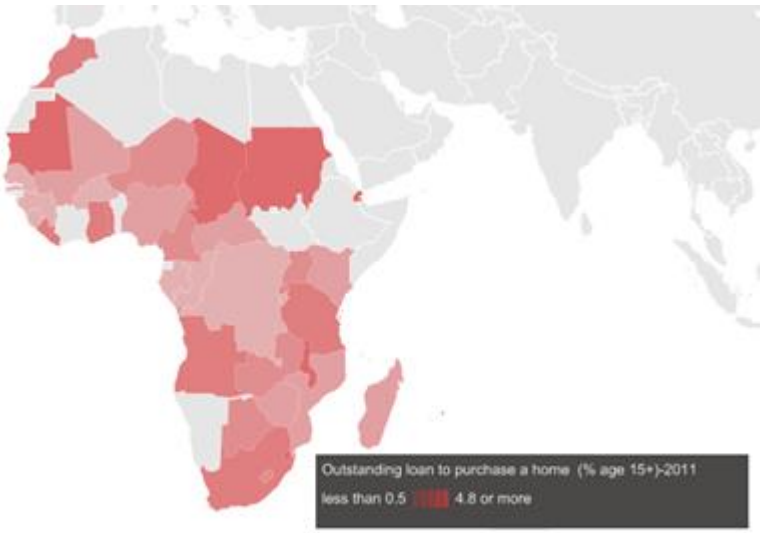
[154] Representative examples; not an aggregated statistic.
[155] For reference, in the US, it is 31.2%.("Global Findex Database: Financial Inclusion Data" (World Bank, 2012), http://datatopics.worldbank.org/financialinclusion/home/.)
[156] UN-Habitat, "Affordable Land and Housing in Africa," (Kenya: UN-Habitat, 2011).
[157] Michael Kihato, "State of Housing Microfinance in Africa" (Centre for Affordable Housing Finance in Africa, 2013).
[158] Marja C. Hoek-Smit, "Scaling Up Housing Finance in Africa," *Workshop on Research on Urban Mass Housing in Africa, St. Catherine's College, Oxford.* (University of Pennsylvania, 2012).
[159] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.

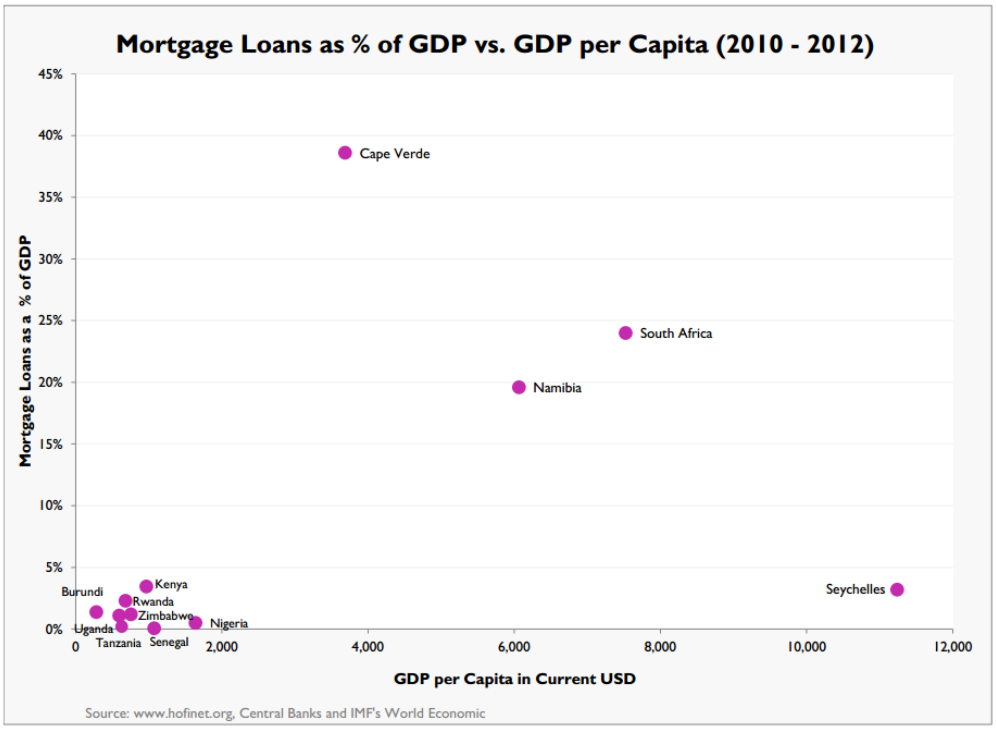
Figure 20. Outstanding loan for home construction and home purchase (% age 15+) in 2011





(Source: World Bank Global Findex Database)

Figure 21. Mortgage Loans as a percent of GDP vs. GDP per Capita for selected SSA countries

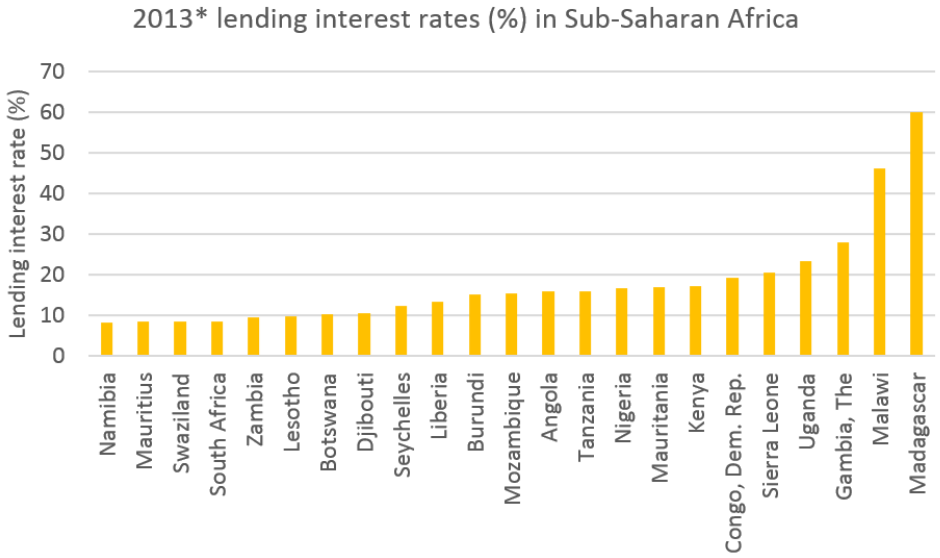


(Source: HOFINET)

Most banking sectors in SSA countries are highly concentrated. In Kenya, 71 percent of mortgage lending is performed by the five largest banks, with the first two holding 50 percent of market share.[160] In Mali, four banks compose 70 percent of the financial sector, and in Rwanda, three banks account for 60 percent of all assets, loans, and deposits. Average lending rates in SSA hover range from less than 10 percent to 60 percent. These statistics demonstrate that the formal banking sector serves a relatively small, high-income population, and in many countries lacks a significant degree of competition.

[160] Ibid.

Figure 22. 2013 lending interest rates (%) in Sub-Saharan Africa*



**Exceptions are Djibouti (2011), Mauritania (2012), and The Gambia (2012).*
(Source: Generated using data from IMF and IFS)

Mortgage finance is a tool that emerges from the intersection of two complementary housing value chains. On the supply side, there is the delivery of a *formal home* (including land title, trunk and site infrastructure, construction codes and inspection); which yields on the demand side an *enforceable collateral-based loan security* (including eligibility, underwriting, closing and recordation, funding and liquidity, servicing, and enforcement). For mortgage finance to operate in volume, both supply-side and demand-side value chains must be fully functional, and in Sub-Saharan Africa these are unlikely to be in place in the intermediate future. In the meantime, other partial solutions (e.g. formalizing the informal) deserve policy attention.

Mortgage lending is constrained by the availability of funds that can be used for mortgage products. At a basic level, growth in mortgage lending is constrained by a lack of the long term funds banks need to overcome a maturity mismatch between deposits and mortgages. A survey administered by the Central Bank of Kenya to mortgage lenders revealed that lenders cited lack of access to long term funds as their primary obstacle to further growth, followed by high interest rates.[161] As is the case in many financial institutions, over 75 percent of the deposits in banks in Cameroon are short-term, which renders them impractical for housing lending. Similarly, nearly 70 percent of the liabilities in Uganda are short term and mature in 30 days or less.[162]

Capital markets are an important source of long term finance necessary for mortgages. In order to overcome this obstacle, lenders in many developed countries obtain long-term funding from investors in capital markets, or a secondary market. Secondary markets are often crucial for improving mortgage affordability because improving liquidity reduces risks, and consequently, risk premiums, for lenders.

[161] Ibid.
[162] James Mutero et al., "Mobilizing Pension Assets for Housing Finance Needs in Africa - Experiences and Prospects in East Africa" (Centre for Affordable Housing Finance in Africa, December 2010), http://www.hofinet.org/upload_docs/CAHF_Mobilizing%20Pension%20Assets.pdf.

Moreover, it can facilitate competition in the primary market by giving thinly capitalized lenders the resources to participate in mortgage lending. In many industrialized countries, a robust secondary market has been crucial for the growth of mortgage lending. However, their success in emerging economies depends on proper regulatory frameworks and a liberalized financial sector.[163]

Mortgage liquidity facilities, in particular, can help emerging economies begin establishing their secondary mortgage markets.[164] Nigeria launched such a facility in January 2014, called the Nigeria Mortgage Refinance Company (NMRC). The NMRC regards itself as a "private sector driven company with the public purpose of developing the primary and secondary mortgage markets by raising long-term funds from the domestic capital market as well as foreign markets and thereby providing accessible and affordable housing in Nigeria."[165] The World Bank approved the US$300 million concessional loan with a 40-year term, of which US$250 million will go towards the NMRC, US$25 million will go towards establishing a Mortgage Guarantee Facility for low-income borrowers, and US$25 million will go towards housing microfinance product development. The set-up of the NMRC has been one of Nigeria's first successful partnerships between the private financial sector and the public sector.[166]

Mortgage penetration across SSA is weak, especially for low-income groups. Those with stable incomes and titled property who could afford a mortgage face supply constraints because of the limited amount of liquidity and long term secondary finance that lenders face. On the other hand, commercial lending for low income, informally employed populations is virtually nonexistent because of low incomes and lack of collateral and high risks. Lending to low-income groups bears higher risks for the following reasons:

- Historically low levels of participation in formal banking
- Prospective borrowers' aversion to holding debt
- Low household incomes, coupled with mostly unstable and informal employment
- Lack of proper collateral
- Formal lenders' lack of experience with due diligence and risk mitigation for informal borrowers
- High transaction costs for both lender and borrower
- Difficulties with enforcement of loan contracts
- Lack of clear land and property rights frameworks

The most affordable mortgages are still too expensive for most low-income groups. Such a mortgage might require a 22 percent interest rate and a 10-year term, which is cost-prohibitive for much of the population.[167] The down payment is also high; usually around 20 percent. In Uganda, for example, the lease expensive housing finance product in 2010 required a minimum monthly salary of US$400, which disqualified 99 percent of Ugandan households.[168]

Savings schemes improve the ability of low-income households to access mortgages, though their scope is limited. For example, the Senegal Housing Bank has a housing savings product that encourages savings by offering borrowers a reduced interest rate on their loan when they save 10 percent of the total

[163] Bank, *Developing Kenya's Mortgage Market*.
[164] Ibid.
[165] "NMRC: Frequently Asked Questions," *Nigeria Mortgage Refinance Company*, 2014, http://www.nmrc.com.ng/?page_id=26.
[166] Ibid.
[167] Paul Collier and Anthony J. Venables, "Housing and Urbanization in Africa: Unleashing a Formal Market Process" (Oxford: Centre for the Study of African Economies, 2013).
[168] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.

purchase price.[169] In Niger, EcoBank and the national union of teachers (SNEN) partnered to finance an affordable housing development program for teachers, who are typically in the lowest income bracket of salaried workers. SNEN members open an account with EcoBank, and are eligible for a loan after saving 15-33 percent value of the house. Once they reach 10 percent, they receive access to land, which is used as a guarantee. The house is then built by a developer. [170] These programs, however, are best suited to middle and lower middle-income groups with access to financial services and have a steady income for savings deposits.

Pension funds represent a significant pool of money that could be used to develop the formal housing sector. For example, these funds (up to 20 percent of GDP in Kenya), show promise as a source of funds for housing development as well as a savings vehicle and avenue by which members could receive assistance in the purchase or construction of a home (via direct loans, guarantees, or asset-backed securities). However, pension funds are currently limited in their use for housing finance because of a lack of experience among fund managers in low-income housing markets, underdeveloped capital markets, limited scale of some pension funds, liabilities for tying up funds in illiquid investments, lack of institutional capacity, and low coverage (2-15 percent of labor force).[171] In Nigeria, the Nigerian National Housing Fund[172] was set up to encourage public sector workers to save towards mortgages. Formal sector workers or bank account holders would make a monthly contribution of, e.g., 2.5 percent of their monthly income (often matched by employers), for a minimum period of time. The balance would earn interest and serve as the basis of eligibility for a housing loan, or be refunded at a later date as a pension. [173]

The expansion of mortgage markets is important for the growth of formal private residential developments and, on a broader scale, for the health of national economies. If mortgages were accessible to even 3 percent of the population, they would contribute an additional US$300 million to African economies.[174] However, when considering mortgage expansion, policymakers must first understand the singular features and constraints of the SSA housing landscape. One important feature of many urban areas of SSA – particularly in West Africa – is that there is no housing resale market. Over 80 percent of Nigerians live in family-owned and held property, and very little of the housing stock changes hands. Homes are not seen as resale assets, but as use assets; perhaps in part because of the constraints and uncertainties of transferring land through customary systems or without formal title and registration.[175,176] This complicates the internationally accepted notion that housing is an investment good, and may mean that there is little natural consumer demand for mortgages in these countries.

[169]The built-in rate/ discount incentives such as this are a common feature of better-run pro-poor housing finance and microfinance institutions. The industry as a whole would benefit from an open-source innovations lab/ innovations library where these case studies are presented and analyzed.

[170] CAHF, 2013 Yearbook.

[171] Mutero et al., 2010 "Mobilizing Pension Assets for Housing Finance Needs in Africa - Experiences and Prospects in East Africa." Center for Affordable Housing Finance in Africa http://www.hofinet.org/upload_docs/CAHF_Mobilizing%20Pension%20Assets.pdf

[172] This program had good intentions but its subsequent implementation has left much to be desired. It is not recommended as a model for replication without significant and obvious programmatic changes, some of which are referenced in the Nigeria country case study.

[173] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*. (Parkview: Centre for Affordable Housing Finance in Africa, 2013)

[174] Ibid.

[175] Tipple et al., "Housing Supply in Ghana: A Study of Accra, Kumasi and Berekum."

[176] K. Konadu-Agyemang, "Structural Adjustment Programs and Housing Affordability in Accra, Ghana," *The Canadian Geographer* 45, no. 4 (2001): 528–45.

Expanding mortgage markets will therefore require extensive consumer education along with complementary improvements to land registries and property laws.

Currently, expanding access to mortgages will only help close the housing gap for upper and middle-income populations. Mortgages are not the most suitable housing finance tool for low-income, informally-employed, informally-housed populations. These populations require housing finance products that are calibrated to the fact that obtaining a home means building components of it incrementally as the resources are available. Housing microfinance, which is currently emerging and developing as sector, likely constitutes the most viable solution for these populations and holds the potential to provide affordability at a much larger scale.

Across SSA, most people do not have access to commercial mortgages. Mortgage finance has proven itself unable to go sufficiently down-pyramid to the price points necessary for affordable housing given income levels in the region, and that is readily explicable in the formality requirements of both the structure itself (the home and its land) and the viability of its collateral security interest. Microfinance, by contrast, does not face the same rigid barriers, but, for reasons outlined in the country case studies, classical microfinance – consumer lending of very small amounts with loan tenors typically less than one-half a year in duration – has not yet expanded into the vast empty space of 'housing microfinance,' for the reasons set forth in the next section.

A.2. Microfinance for housing would improve access to quality housing for some low-income groups

Microfinance institutions comprise several categories of formal financial services in Africa. These include five categories: microfinance banks, rural and community banks, cooperative networks, NGO microfinance institutions (MFIs), and non-banking financial institutions.[177] Cooperative networks include community-based savings groups such as ROSCAs (Rotating Savings and Credit Associations), SACCOs (Savings and Credit Cooperative Organizations), VSLAAs (Village Savings and Loans Associations), ASCAs (Accumulating Savings and Credit Associations), FSAs (Financial Service Associations), mutualist institutions, and credit unions. Each of these institutions are local and member-owned, and leverage the power of collective savings and accountability.

Microfinance has become increasingly popular throughout SSA. Since 2002, 22 African countries have passed microfinance-enabling legislation.[178] Microfinance attracts a wide range of actors: commercial banks, microfinance institutions, savings cooperatives, NGOs, family and friends, and informal moneylenders.[179] In 2013, SSA's microfinance sector reported a total of 4.5 million active borrowers and gross loan portfolio of US$7 billion,[180] which is fairly moderate compared to the reported totals of other developing regions (Table 6~~Table 8~~). [181] This represents an average amount loaned per borrower of US$1,555. The differences in average loan amount by region may be partially attributable to whether MFIs lend more to entities or to individual borrowers, and if MFIs tend to lend multiple loans to each client.

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[177] Kristin Helmore, "State of the Sector Report: Bringing Financial Services to Africa's Poor" (Canada: CARE, 2009).
[178] ibid.
[179] Ibid.
[180] "MIX Market Microfinance Institutions Database," *MIX Market*, n.d., http://mixmarket.org/mfi.
[181] These figures are aggregations of self-reported data from individual MFI institutions, so they are likely not comprehensive. Active borrowers are defined as either individuals or entities (such as savings groups) that hold an outstanding loan balance with the MFI, while Gross Loan Portfolio is defined as outstanding principal for all outstanding client loans.

Unlike commercial banks, in many countries, MFI deposit and lending rates are not regulated.[182] This supports wide variation in interest rates and lending terms across the region. In the absence of interest rate ceilings, interest rates vary greatly from one MFI to another, even within the same country. In Cameroon, interest rates on savings vary from 3.25 percent to as much as 15 percent annually, while interest rates on loans range from 3 to 10 percent monthly for overdrafts. The latter excludes other related charges such as subscription charges, file fees, and insurance. Interest charged on credits is over 30 percent, with the exception of the Community Growth Mutual Funds, a MC2 micro-bank network where the maximum interest rate on loans is 15 percent. This variation in interest rates is likely due to differences in operating costs and access to secondary finance from which loans are originated (Dorftleiner et al. 2014; Cotler and Almazan 2013).

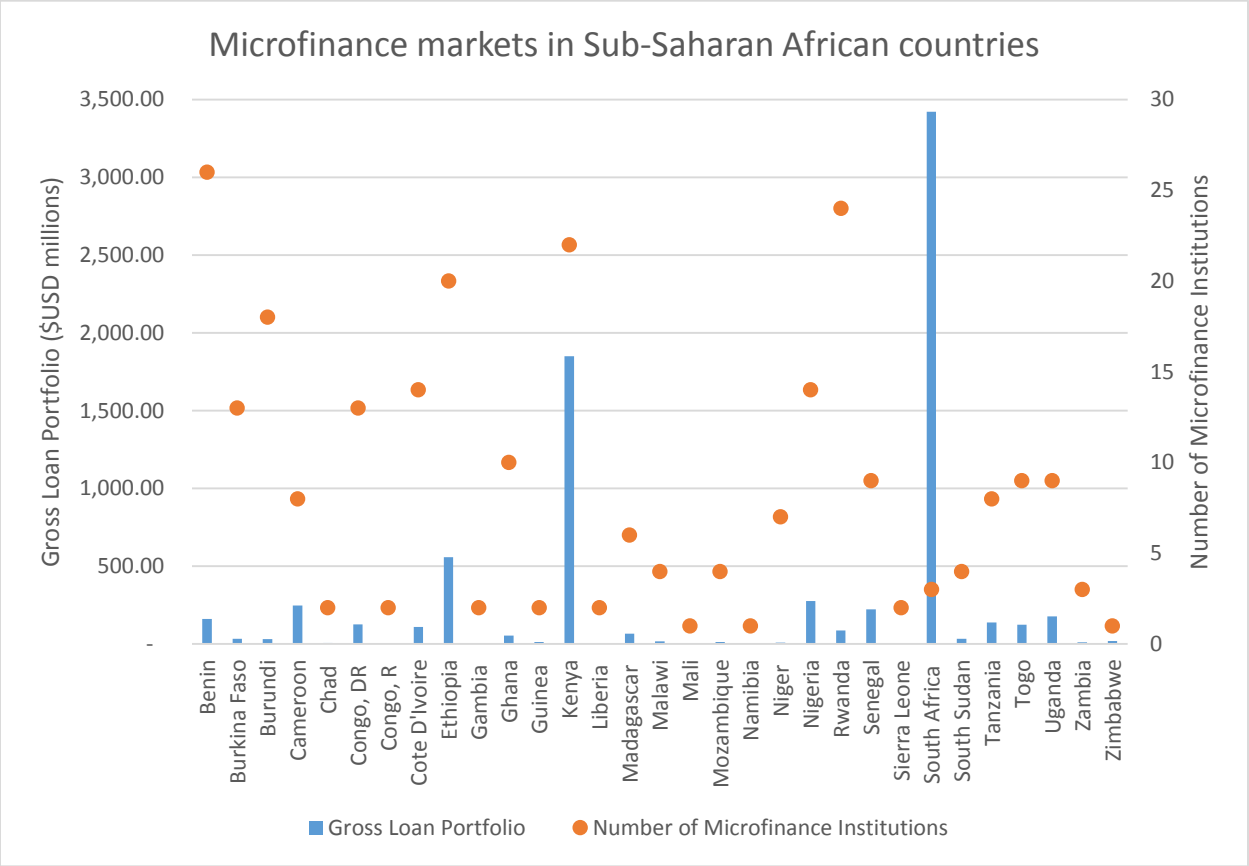
Table 68. Active borrowers and gross loan portfolio for microfinance institutions by region

Region	***Active Borrowers***	***Gross Loan Portfolio (US$)***	***Average amount loaned per borrower (US$)***
Sub-Saharan Africa	4.5 million	7 billion	1,555
East Asia and the Pacific	12.7 million	9.9 billion	780
Eastern Europe and Central Asia	2.7 million	12 billion	4,444
Latin America and the Caribbean	16.2 million	34.1 billion	2,105
Middle East and North Africa	1.6 million	1.1 billion	688
South Asia	47.3 million	8.5 billion	180

(Source: MIX Market 2013)

[182] Cameroon is not among the 17 of the 48 countries in SSA that have interest rate caps for MFIs. Mix and CGAP, "MIX Microfinance World: Sub-SaharanAfrica MicrofinanceAnalysis and Benchmarking Report 2010," *A report from Microfinance Information Exchange (MIX) and Consultative Group to Assist the Poor (CGAP)* (Washington, DC: Microfinance Information Exchange, Inc, 2011).

Figure 23. Number of MFIs and gross loan portfolio of microfinance markets in SSA



(Source: Generated using data from MIX Market)

SSA countries have a wide variation in competition in the microfinance sector. *Figure 23* ~~*Figure 23*~~ shows that South Africa, Kenya, and Ethiopia have the most microfinance activity in terms of gross loan portfolio, though the structure of each market varies. On the one hand, South Africa's microfinance market is highly concentrated, with three microfinance institutions accounting for a total of US$3.42 billion in loans. A single retail bank (Capitec Bank), accounts for US$3.4 billion of that total; about 99 percent. Ethiopia, on the other hand, has 20 microfinance institutions that account for US$557 million, of which the biggest institution, Amhara Credit and Savings Institution (ACSI), accounts for US$270 million. By contrast, Kenya, has more than four times the number of MFIs as South Africa, though a loan portfolio that is only about half the size. Burundi however has among the greatest number MFIs, but among the smallest total portfolio sizes.

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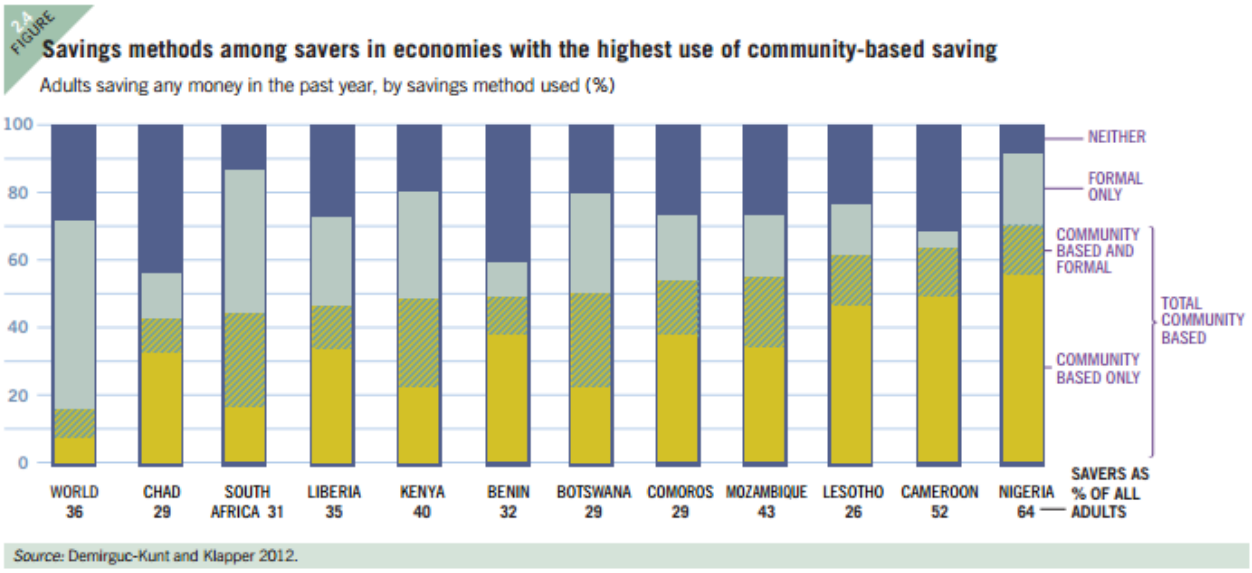
While microfinance participation carries advantages, its benefits should not be oversold. Microfinance provides a source of credit to populations without previous formal banking experience. As such, it can provide a basic familiarity with financial services and help borrowers develop a credit history. However, recent evidence suggests that while microcredit is used for investment in productive enterprises, assuaging shocks to household income and increasing expenditures on food and durable goods, there is limited evidence for long term household income gains (Attanasio et al 2015; Banerjee et al 2015). Furthermore, lenders have been criticized for excessively high interest rates and unfair or overly punitive collection practices (Rahman 1999; Dixon et al. 2006). While microfinance has significant positive effects on consumption for certain segments, it should be considered as a tool in expanding access to financial services for the poor, rather than as a means to boost incomes among informal households.

Community-based savings groups are especially popular in SSA. As Figure 30 shows, most of the economies with the highest use of community-based savings are located in SSA; even South Africa, with among the highest per-capita GDP has a participation rate that is twice the world average. In Cameroon, *tontines* operate as non-bank informal savings co-operatives which then on-lend to their members in rotation (similarly to ROSCAs), and are a vital part of the informal financial sector. About 50 percent of Cameroonians participate in them, including individuals from all income brackets and, above all, women and youth. Various forms of *tontines* exist to suit different market niches including financial *tontines*, *tontines* of goods and services, credit-savings, emergency-savings, school-banks, and housing investment.[183,184] In Nigeria, informal housing finance is largely family-based, with minimal government participation in the process. In Nigeria ROSCA-type arrangements include 44 percent of adults (and 69 percent of those who save) report using these kinds of savings clubs.[185]

Figure 24. Savings methods among savers in economies with the highest use of community-based saving



Housing microfinance is a small but growing source of credit for the urban poor. While the microfinance sector is relatively well-established, the housing microfinance (HMF) sector in SSA, and around the world, is still nascent though growing. Housing microfinance is well-suited to the incremental self-construction model which accounts for the bulk of new additions to the housing stock. Housing microfinance inhabits the gap between mortgage finance and microfinance. [186] The Center for Affordable Housing Finance in

[183] Lea Pulcherie Maffengang, "Tontines: The Informal Financial Sector in Cameroon," *Fair Observer*(2013), http://www.fairobserver.com/region/africa/tontines-informal-financial-sector-and-sustainable-development-cameroon.

[184] CAHF, "2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets," (Parkview: Centre for Affordable Housing Finance in Africa, 2013).

[185] Demirguc-Kunt and Klapper, "Measuring Financial Inclusion: The Global Findex Database."

[186] For any loan product, R = P x L. Risk (R) is the Probability of default (P) times the Loss (L) given default. As referenced in the preceding discussion of mortgage finance, a mortgage loan is a collateralized interest – and its value chain and business model are designed to reduce L, the loss after default, by allowing for seizure and repossession of the collateral and then its successful resale. Microfinance approaches the problem differently. L, loss given default, is closer to 100%, so P must be reduced down to the smallest number possible, which means limiting the loan to a small amount, for a very short time, to a low risk customer. These two risk-management

Africa estimates that 15-40 percent of general microfinance loans are channeled towards housing needs.[187] Given a gross loan portfolio of US$7 billion for the region,[188] that would amount to around US$1.05 to US$2.8 billion.

Dedicated housing microfinance initiatives are emerging across the region. Examples of dedicated housing microfinance funds include the Kuyasa Trust in South Africa,[189] where about two-thirds of the population cannot access formal bank credit, and savings and loans schemes are operated by NGOs affiliated to Shack/Slum Dwellers' International. Others include the Swalisano Urban Poor Fund in Zambia[190] and the Mchenga Fund in Malawi.[191] Kenya, with one of the more developed microfinance markets in SSA, is beginning to see the emergence of a nascent HMF sector. Jamii Bora Bank and Makao Mashinani are examples of MFIs that offer housing microfinance products. Makao Mashinani, in particular, offers incremental financing linked with technical assistance for self-construction, and also finances land acquisition and infrastructure development; options that were pioneered in Latin American HMF institutions (Ferguson 1999).[192]

Microfinance and savings groups have the potential to reach a middle segment of the housing finance market. Figure 25~~Figure 25~~ shows which services are available to different income levels in Uganda. Less than 1 percent of households in the country have access to mortgage loans from commercial banks, about 20 percent of the population is able to access housing microfinance loans, 17.5 percent access smaller loans from either MFIS or SACCOs, and over 60 percent of the population do not have access to any financial service.[193] These numbers are roughly similar for a number of other countries in the region, and the hierarchy of mortgage finance, housing microfinance, and microfinance/informal finance tends to hold.[194] In Tanzania, the bottom 54 percent are totally excluded from organized housing finance sources, the middle 35 percent have access to informal finance, the upper middle 8 percent can access microloans from MFIs, SACCOs, and banks, and only the top 3 percent can access mortgages.[195]

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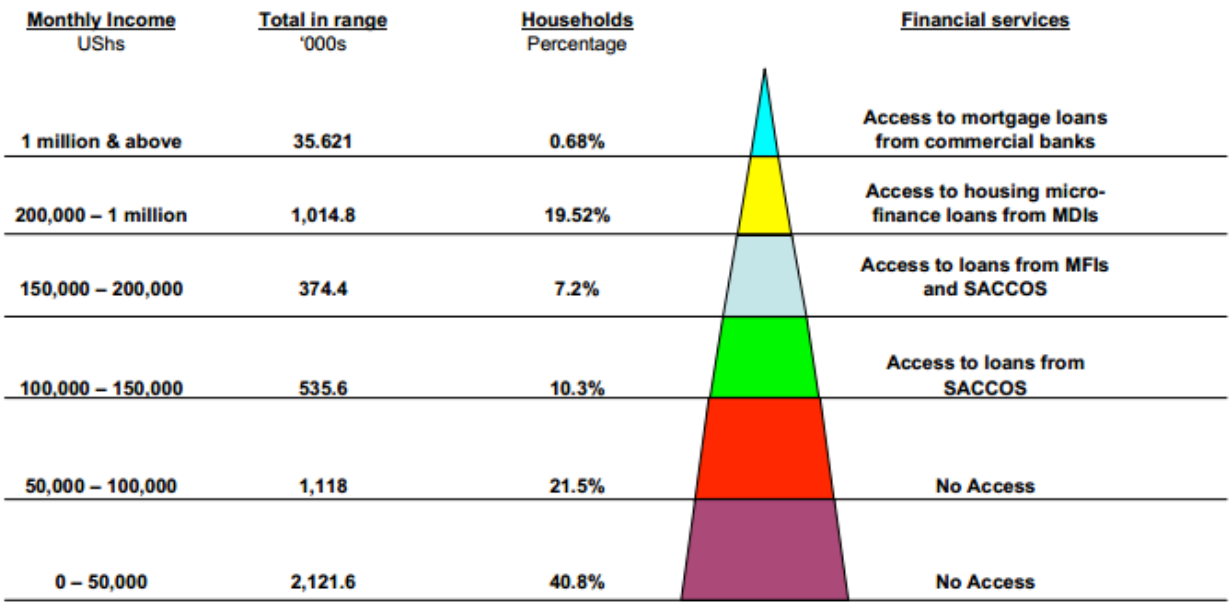
models are at odds: one emphasizes reducing risk (P), the other at reducing loss (L), and they use different credit decision models. Housing microfinance sits between the two, but neither the mortgage finance risk model nor the microfinance risk model applies without adaptation.

[187] Michael Kihato, "State of Housing Microfinance in Africa" (Centre for Affordable Housing Finance in Africa, 2013).
[188] MIX Market 2013. "Africa Market Profile" http://www.mixmarket.org/mfi/region/Africa "
[189] S. Mills, "The Kuyasa Fund: Housing Microcredit in South Africa," *Environment and urbanization* 19, no. 2 (2007).
[190] UN-HABITAT, "Zambia Urban Housing Sector Profile."
[191] "Malawi Urban Housing Sector Profile."
[192] In 2012, Makao Mashinani received a loan from Shelter Afrique of KSHS 40 million (US$450,959) to support low cost and social housing initiatives in Kenya, see "Shelter Afrique and Makao Mashinani LTD (Kenya) Sign Agreement for a Social Housing Loan of KSHS 40,000,000," *Shelter Afrique*, July 12, 2012, http://www.shelterafrique.org/index.php/shelter-afrique-and-makao-mashinani-limited-kenya-sign-agreement-for-a-social-housing-loan-of-kshs-40000000/.
[193] William Kalema and Duncan Kayiira, *Overview of the Housing Finance Sector in Uganda*, Access to Housing Finance in Africa: Exploring the Issues (FinMark Trust, June 2008).
[194] Detailed information on the breakdown for other countries, as well as rich data on other housing finance indicators, is provided in FinMark Trust's "Access to Housing Finance in Africa: Exploring the Issues" series.
[195] James Mutero, *Overview of the Housing Finance Sector in Tanzania*, Access to Housing Finance in Africa: Exploring the Issues (FinMark Trust, n.d.).

Figure 25. Financial Access Pyramid for Uganda



(Source: FinMark Trust 2008)

Estimates suggest that there is a modest potential for HMF expansion. Kihato (2009) estimated urban HMF demand in African countries by calculating the number of potential borrowers[196] and the estimated total value of the market (number of borrowers multiplied by differentiated average loan sizes[197]). They estimate that the potential demand for HMF in urban areas is about US$2-5 billion divided between 7 and 17 million borrowers, which constitutes only about 3 percent of the population. Also the data show, unsurprisingly, that most of the potential borrowers will be in higher-income and predominantly urban SSA countries. Nonetheless, HMF represents a less expensive alternative to traditional mortgage finance and it can more easily accommodate incremental housing investment.

Although dedicated housing microfinance product offerings are increasing in number, their scale has been limited. In some countries, financial regulations constrain lending activities. For example, in Burundi, MFIs aren't authorized to grant mortgage loans and do not offer any home improvement products, but, allow business loans for housing purposes.[198] Even with a well-developed microfinance sector, as in Ghana, it is challenging to roll out effective HMF products. Ghana's Pro Credit launched one product in

[196] This was done by filtering (i) those not served by formal lenders, (ii) those who may want a loan, and (iii) those who can afford a loan. The range for "willingness to borrow" and affordability are determined from literature. Please see Kihato 2009 for further information on methodology.

[197] Differentiated analysis in which (i) specific loan averages used where available in the literature and (ii) where they are not available, proxy amounts used by drawing on loan averages for countries in (i) with the closest Human Development Index. Average loan sizes were found in the literature for the following countries: Morocco (US$1,150), South Africa (US$430), Kenya (US$533), Uganda (US$942), Ethiopia (US$228), Benin (US$666), Rwanda (US$350).

[198] CAHF, *2013 Yearbook - Housing Finance in Africa: A Review of Some of Africa's Housing Finance Markets*.

2006, but had to switch to funding SMEs (small and medium enterprises) soon afterwards because of low repayment rates and a lack of funds.[199]

Women's savings groups have also become a means of supporting HMF. Funding streams developed by Shack/Slum Dwellers International and used by their affiliates in many SSA countries (including Malawi, South Africa, Zambia, Namibia, Ghana, and Sierra Leone) not only allow women's groups to save for their own housing but can also enable them to form together and build it themselves. Women's groups can invest in a communal account that a national organization oversees and uses to leverage loans from international agencies. In this way, SDI's Ghana affiliate (FED-UP) put together a complex set of loans and grants to fund flats in Ashaiman[200] and the Malawi affiliate (CCODE) raised funds to build in Angela Goveya.[201]

The Growth of Housing Microfinance: The Case of LaFarge

In June 2012, a global cement company, LaFarge, launched a housing microfinance program with the goal of improving access to affordable housing for 2 million people by 2020, in partnership with DFIs and local microfinance banks. At the end of 2013, projects were established in 15 countries, including Indonesia, Serbia, Philippines, Nigeria, and Zambia.[1] In Nigeria, LaFarge will use 5 million euros from the French Development Agency (AFD) and partner with the largest microfinance bank in Nigeria, LAPO (Lift Above Poverty Organization). LAPO will offer housing microfinance to families for home construction, while LaFarge will offer technical assistance through architect visits or construction plan development.[1] Additionally, in 2013, LaFarge organized the First International Workshop on Housing Microfinance, which drew organizations such as Habitat for Humanity, Global Communities, African Development Bank, and the International Finance Committee. Thus far, La Farge's efforts have affected 120,000 people,[1] and demonstrates the potential for private sector actors to help expand the scale of housing microfinance.

A.3. Conclusion

Formal financial institutions have limited coverage in SSA. Microfinance institutions have been more successful at extending access to credit to lower-income groups, though experience across the region varies. The main difficulties to expanding mortgage lending are the high cost of capital required to package mortgage products and the limited demand for mortgages outside of high-income groups. Informal workers with low and irregular incomes do not have formal savings accounts and are difficult to assess for creditworthiness. Instead, the majority of housing is financed through personal savings, remittance transfers, informal lending from friends and relatives and from community-based savings clubs.

The microfinance sector has improved access to finance for lower-income groups. Forty years of experience with microfinance globally has established a 'basic model' of small-scale loans aimed an income-generating activities. This generally positive experience with pro-poor lending stands in sharp contrast to formal-sector down-pyramid efforts, which have seldom been deeply impactful. [202] However,

[199] Ibid.
[200] UN-Habitat, "Ghana Housing Profile," (2011).
[201] UN-Habitat, "Malawi Urban Housing Sector Profile," (2011).
[202] The global experience with microfinance shows that it has been successful extending credit to those who previously did not have it. However, there remains uncertainty over how much this reduces poverty or what other impacts it has on poor households (c.f. Banerjee et al. 2009; Chliova et al. 2014)

without guidance and capacity development, housing microfinance will not emerge from mainstream microfinance. This is because it encounters scaling barriers; for example, loan amounts must be 5-10 times larger and loan tenor must be likewise 5-10 times longer. This changes the risk profile and requires, among other things, a different risk management strategy, revenue-model equilibrium, and organizational structure.

While interest in HMF is growing and there is some potential to extend formal credit to those without access to mortgages, a more comprehensive assessment of the model is necessary. Successful 'positive-deviance' business models for housing microfinance are scarce, small-scale, and not well-documented or connected with each other. A proper assessment of successful case studies is needed to better understand how these organizations emerged, how they assess markets, develop products and are able to scale up operations. Such work could be blended with global theory on housing microfinance[203] to yield a global State of Housing Microfinance, testing whether current housing microfinance theory is in fact supported by emerging practice. If it is, then a further research agenda would be to create a franchise or "kit" model for adoption by interested MFIs globally and in SSA, as well as technical assistance to those early-adopter MFIs.

Government policy support can help the development of urban HMF institutions. Based on the regional review and country case studies, there are several options for improving the conditions for HMF. On the policy side, HMFs should be regulated separately from MFIs, mortgage lending and or deposit-taking institutions. Pilot programs would benefit from initial exemptions to interest rate ceilings. Donors and development finance institutions should be able to establish a separate funding body to develop an initial HMF loan portfolio. Such initiatives would find support in countries with a well-established microfinance sector, large urban areas with rising incomes and a large informal housing stock and where proof of land occupation, such as powers of attorney, assignment letters or judicial rights of notice before relocation are held by residents.

B. Remittances could have a substantial impact on housing, but further understanding and action are constrained by limited data.

Remittances, or money sent back by emigrants to individuals in their home countries, are a considerable source of foreign investment in Africa. The continent's total remittance flows were estimated at US$40 billion in 2010, half of which went to SSA. In a number of countries, remittances exceed other sources of funds, such as foreign direct investment, portfolio equity, and debt flows. Nigeria's remittances inflows alone totaled US$20.6 billion in 2012.[204] The World Bank projects that in 2016, SSA's yearly remittance flows will reach US$41 billion.[205] Further, around 40 percent of those adults with formal bank accounts

[203] The Affordable Housing Institute has published concept papers around Home Asset Loan Finance (HALF), an exposition of housing microfinance reflecting its unique nature halfway between microfinance and mortgage finance. HALF is consistent with the successful case examples observed globally, but more research is needed to illuminate the more general conditions for success.

[204] Dilip Ratha et al*, Leveraging Migration for Africa: Remittances, Skills and Investments*, (Washington D.C.: World Bank, 2011). 2012 data obtained directly from author.

[205] "Migration and Remittance Flows: Recent Trends and Outlook, 2013-2016" (The World Bank, October 2, 2013), http://siteresources.worldbank.org/INTPROSPECTS/Resources/334934-1288990760745/MigrationandDevelopmentBrief21.pdf.

use them for sending or receiving remittances.[206] However, the cost of sending remittances to SSA is the highest in the world, with the fee ranging from 5 to 15 percent of the transaction.[207]

While the importance of remittances for housing finance is widely observed, limited data exists on the size and nature of these investments, particularly in SSA. This trend is not surprising given the high cost of land acquisition and housing construction discussed previously. Table 7~~Table 11~~, from one of the few large-scale studies on African migration, suggests that households direct these funds towards land purchase, new construction, rebuilding, and rent, with variability between countries as to the most significant uses. For recipient households in Burkina Faso and Kenya, households concentrated their resources in new house construction. For Nigeria, it went towards land purchase. Remittances represent a significant source for enhancing overall household welfare, which can increase expenditures for housing consumption or savings rates. For example, if African banks were able to securitize future remittance flows – in order to leverage more external financing – they would be better positioned to fund low-income housing and infrastructure projects.[208] Further, there is evidence that remittances stabilize borrower's capacity to repay and therefore reduce the incidence of non-performing loans.[209]

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Table 7~~11~~. Percentage of remittances going towards housing expenditures for recipient households in selected African countries

	Burkina Faso			Kenya			Nigeria			Senegal			Uganda		
	OA	WA	D	OA	WA	D	OA	WA	D	OA	WA	D	OA	WA	D
Rent	1.4	0.6	1.7	5.7	0.4	7.4	4.4	4.9	0.8	1.0	0.0	2.2	5.1	8.1	4.5
House construct	35.7	10.1	2.6	11.2	27.5	1.3	5.8	0.0	0.1	7.0	0.7	0.0	2.5	1.6	0.4
House rebuild	0.3	1.0	1.2	5.3	3.1	1.3	4.7	3.2	7.0	4.2	0.7	0.1	6.3	3.2	2.1
Land purchase	0.0	1.4	0.1	8.4	7.0	1.3	24.8	16.6	18.2	3.0	0.0	0.0	3.8	4.8	2.1

OA = remittance flows from outside Africa
WA = remittance flows from within Africa
D = remittance flows from domestic sources

(Source: World Bank Africa Migration Project 2011)

[206] World Bank 2014 "Global Findex Database: Financial Inclusion Data."
[207] World Bank 2013"Migration and Remittance Flows: Recent Trends and Outlook, 2013-2016."
[208] Ibid.
[209] Christian Ebeke, Boileau Loko, and Arina Viseth, "Credit Quality in Developing Economies: Remittances to the Rescue?" (International Monetary Fund, August 2014), http://www.hofinet.org/upload_docs/Credit%20Quality%20in%20Developing%20Economies.pdf.

6. Key Conclusions and Policy Directions

The report finds that informal housing is an adaptation to two basic conditions in many cities across the region. First, rapid urban growth that is creating effective demand faster than any formal system, public or private, can adapt. Slums, in short, are economically rational for those with limited resources facing high costs for obtaining land, who lack infrastructure and cannot afford homes that meet regulatory standards. Second, the complexity (economic, political, and legal) of a modern urban formal housing delivery system requires many 'enabling institutions' to be in place simultaneously and functioning sequentially. Improving capacity takes time. Legacies of pre-urban land use patterns, laws, zoning, governmental institutions, building practices, and financial forms all create obstacles to reform.

Urbanization across SSA is increasing, but increases in per-capita incomes have not kept pace with the cost of formal housing. Housing costs far exceed conventional measures of affordability in most countries in the region. The main problem has to do with the lack of quality affordable housing stock, the cost of which far exceeds demand. Instead, the urban poor often find or build substandard housing or engage in informal rental and rent-free tenure arrangements. However, as per-capita incomes rise in urban areas, demand for quality housing with access to infrastructure will continue to increase.

The preponderance of informal housing is due to a combination of poverty and escalating formal housing costs. Informal chains mirror formal ones, though there are key challenges in the supply and demand side for quality housing delivery which effects access and prices. Value chains that deliver housing through formal channels – meaning that land and property are titled, registered and meet building standards and regulations, and can be purchased as a complete product with mortgage finance – are incomplete and uneven. The report has shown through a value chain analysis that different links in supply and demand chains distort the delivery of housing by raising the costs for building and financing it. The lack of affordable housing in the region is directly related to these distortions.

Government subsidy programs have done little to promote wide-scale housing affordability. There are two main limits to the reach of government subsidy programs. First, they are often poorly designed because they lack targeting and monitoring criteria, so subsidies can be captured by groups that are wealthier and could afford market-rate housing. This is the case for government-built housing units in a number of countries. Second, governments, like any other housing developer, must contend with the same structural limits in the supply and demand value chains. These inputs – including land, infrastructure, construction materials and technology as well as consumer and developer finance – all raise the production cost of housing. Even subsidized prices remain unaffordable for low-income groups and are not financially sustainable to bring to scale to meet demand..

Land tenure and administration systems complicate the function of land markets. The plurality of tenure systems found across the region (and often even within the same country) discourages the market-based circulation of land because rights to control or exchange land may be unclear and subject to dispute. Land administration systems such as registries and cadaster records are incomplete and are underused for enforcing legal claims or fiscal obligations of land holders, diminishing the ability for lenders to use land as collateral. Building standards and regulations, particularly with regard to plot sizes and land use intensity, discourage the efficient development of urban land and place additional burdens on

infrastructure. Each of these factors raises the cost of housing by increasing the costs of land assembly, raising the risks for investment, and making infrastructure extensions less cost effective.

Construction costs increase the cost of all types of housing. Housing units cost more because building materials are imported and there are few locally-based skilled contractors and development firms to build them at scale. Regulations and standards also add to the cost of housing and may be too outdated or unreasonably restrictive. Similarly, the region faces a challenge of scaling up the complementary service industries – architectural design, construction inspection, property valuation and appraisal, title review and verification, title insurance – that in other contexts have expedited the value chains and reduced the marginal cost of housing construction and consumer finance. This suggests that hand in hand with legislative reform must be the buildup of institutional capacity – education, accreditation, and training – so that new rules as written are consistently enforced as intended.

Housing finance options for low-income groups are limited. Across the region, the majority of residents do not have formal savings accounts and are not able to obtain mortgages for housing consumption. The lack of savings reduces the amount of finance available for lending institutions to develop consumer mortgage or other lending products. The major source of housing investment is from household savings and government investment, rather than capital markets. This can crowd out public investment in other important sectors such as education, health and infrastructure. The lack of credit for development finance limits investment in domestic construction activities that could provide housing at scale.

Most housing is built incrementally, which is reflected by the most typical sources of housing finance: savings and small loans. The majority of urban residents build shelter themselves or through the assistance of local laborers. Without access to mortgage finance to purchase complete homes, housing is consumed incrementally through incremental investments from individual savings, remittance transfers, participation in savings cooperatives or through the use of microfinance. The expansion of microfinance lending for small and medium enterprises has given more low-income groups access to relatively affordable finance and banking services. Housing microfinance, though currently limited in its scope in SSA, could be a way to bridge the gap between small, short tenor microloans and large, long tenor mortgages, with a loan product tied to construction material discounts or technical assistance.

The incidence of poverty and housing informality in SSA countries requires a suite of complementary interventions to improve affordability. In many SSA countries, 60-70 percent of the population is too poor to access safe, affordable housing. Due to the diversity of needs and challenges at different points in the value chains, there is no single fix. Rwanda's housing policy is illustrative of this integrated approach (Box XX) These may include investments in infrastructure, sites and services, land titling and transfer reforms, strengthening of MFIs and incubation of housing microfinance entities, reduction of tax or tariff barriers, earned-amnesty and enumeration programs to allow informal housing to become formal, and buildup of savings cooperatives/ credit unions to provide additional consumer finance, for example.

Box XX: Rwanda's National Housing Policy: Developing an Inclusive Housing Market

Rwanda's 2015 National Housing Policy incorporates many of the housing affordability policy principles discussed in this report and takes a broad view of housing provision and tenure type. The policy recognizes that support for an array of housing and housing finance arrangements, including rental and self-help construction, provides an important entry point toward improving the housing sector as a whole.

The document emphasizes collaboration across ministries and engagement with the private sector. For example, it integrates the need for including disaster risk mitigation and principles of green building and resource efficiency in planning and building standards which can both reduce the exposure to natural disasters and the consumption of water and energy in new units. It supports the incentives to densify land uses through the zoning code and introduces an "urban development fund" directed toward infrastructure investment priorities, where public services and utility connections are bundled and built together.

The policy also explicitly aims to avoid the market distortions caused by poorly designed housing subsidies and the direct provision of housing. Instead, the housing ministry will develop subsidy interventions according to needs based on income, based on "established through up-to-date-evidence-based data" such as verifiable income data and detailed demand analyses (pg. 35). Support for social housing will be directed at specific groups (such as disabled and elderly people) with explicit resale restrictions that will both discourage selling to wealthier groups and will not crowd out private investment. Even further, housing subsidies aimed at developments for middle- and upper-income groups will include a required set-aside of affordable units.

The implementation strategy focuses on engaging the private sector by supporting alternative finance and investment arrangements such as savings groups, credit cooperatives, microfinance and encouraging higher rates of savings to stimulate lending. It also makes room to strengthen the construction sector through assistance in training, workforce development and increasing the sourcing of building materials through local providers, which can provide jobs and lower the cost of home construction.

Source: Ministry of Infrastructure, Republic of Rwanda, National Housing Policy 17/3/2015

A Way Forward

This section outlines a framework for housing reform based along three overlapping themes.[210] Table XX revisits the conceptual framework introduced at the beginning of the report, identifying the main areas of supply and demand value chains for housing delivery, contrasting the experience of SSA with a formal housing delivery model. It also organizes the key steps that policy makers can take to improve housing access and affordability and which groups these activities will benefit most directly. The conceptual framework is shown in Figure XX. At the most basic level, "cross-cutting" interventions are those that help a country's *entire* land and housing sector, including both formal and informal delivery systems. Those solutions geared toward the informal sector are aimed at providing low-income families with resources to access infrastructure and at improving the scope of affordable housing options. Finally, recommendations for the formal sector are intended to help governments use the housing sector as an engine for economic growth. A more detailed list of specific actions is included as Appendix 7.

[210] For an in-depth discussion of each recommendation, please refer to *Appendix 5. Detailed Recommendations Implied by Value Chain Analysis.*

Table XX: Summary of Key Findings and Recommendations

	Housing Delivery Component	Formal	**Common SSA condition**	*Key Action Areas*	*Scope of Impact*
Supply	*Land Tenure and Administration*	Freehold or leasehold title; title or deed registry	**Competing tenure systems and or absence of title:** squatting; land invasions; illicit subdivision and sales	*Strengthen cadaster and land registry systems and land management practices*	First priorities: Cross cutting solutions that improve overall access to housing
	Planning Standards and Regulations	Compliance with FAR, site setbacks, building codes	**Variation in site density, design and lot coverage**	*Improve city planning and create more flexible regulations and standards*	
	Construction sector	Sector with professional, licensed workers	**Self-built, or use of informal unlicensed laborers**	*Strengthen the capacity of the construction sector, improve access to finance for developers and builders to expand their businesses*	
	Building Materials	Mass produced materials with standardized quality	**Variation in type and quality of materials:** Scavenged items, traditional manufacturing techniques, some use of manufacutured materials where they can be obtained	*Improve the quality and scale of local building material manufacturers*	
	Infrastructure	Trunk line utility connections	**No trunk lines:** illegal wiring, pit latrines, household cisterns	*Targeted investments in infrastructure and informal settlement upgrading*	Addressing Informality: Improving access to quality housing for the poor
Demand	*Formal savings accounts*	Savings account deposits used for mortgage lending	**Little formal savings:** Reduces capital available for lending to consumers or developers	*Support the development of alternative finance sources for the urban poor; housing microfinance, credit cooperatives, savings groups, community mortgages*	
	Underwriting and verification	Assessment of income and creditworthiness to create mortgage terms	**Lack of formal income and land collateral:** Reduces eligbility for housing subsidy programs, raises risks profile for commercial mortgage lending		

	Mortgage loans	Long term loan for obtaining complete, titled house	**Few mortgages:** Most households use **p**ersonal savings, microcredit, savings groups and other non-commercial sources	*Reform the commercial lending sector to allow access to longer term sources of finance to develop a more competitive mortgage market*	Improving formal housing investment: Harnessing housing for growth

A. Cross Cutting Solutions for the Housing Sector

Land, planning and construction issues affect the delivery of all housing. Improvements in these areas form the foundation for addressing informality and for catalyzing growth in the formal housing sector as well as the broader domestic economy. They can improve both the ability of low-income households to obtain land and build their homes incrementally and also for formal developers to assemble land for new construction. Urban planning standards and regulations can improve densities and facilitate more efficient investments in network infrastructure and reduce the costs and time necessary to complete construction for informal and professional developers alike. Land use planning and infrastructure directly influence the form of cities, the mobility of residents, and the ease with which they can access jobs and services. Finally, governments should promote the adoption of low-cost but superior materials and technology for home construction. Local sourcing of materials and the adoption of low cost, high durability building technologies would help these products reach the scale necessary to reach informal dwellers, and also stimulate labor participation and investment in the construction sector as a whole.

Key areas for policy attention include:

Land

- Strengthening land cadaster and registry systems in order to allow easier access to information about land claims and tenure
- Improving public land management in ways that can ensure an adequate supply of land for infrastructure and public service provision

Planning

- Improving city planning practices and development standards to encourage a density and diversity of land uses.
- Allow flexibility building and land use standards to reduce the time and costs needed for permissions and approvals and to better accommodate incremental construction

Building and Construction

- Support the growth of local building material manufacturers and construction firms in order to building costs, improve the durability of units and stimulate the growth of the construction and property development sector

B. Engaging Informality: Toward Inclusive Housing Policy

Building on cross-cutting solutions such as improved land tenure, planning and building regulations., ow-income and informally-housed groups can improve their access to housing with infrastructure upgrading and support for incremental housing finance. This approach engages and enhances the shortcomings of existing informal housing development channels and is better suited to the abilities of low and middle income groups to pay. This would require developing and experimenting with new housing microfinance

products such as developing tools and best practices and disseminating them throughout the sector across the region. These financial products could be combined with subsidies for low-cost materials and construction technology to increase access to these products and initiate a source of investment in the domestic building materials industry. Lending institutions also need greater policy support so that they can obtain more flexibility for lending terms and collateral requirements and more capacity to draw from client savings in order to develop and secure new loan products for housing

Alternative financing strategies can improve the targeting of infrastructure investments to lower-income areas, rather than concentrate coverage in high- and middle-income neighborhoods. On the institutional side, governments can prioritize infrastructure investments to low-income and service-deficient informal settlements (such as subsidies for hookup costs) using explicit targeting criteria. Similarly, coordination between local and national governments can improve the system of transfers or fiscal autonomy for using tax revenue in order to invest in service delivery based on these criteria. They can also support the diversification of service delivery channels by reforming the governance and activity scope of state-owned enterprises in order to promote more competition and engage private sector participation.

Key areas for policy attention include:

Infrastructure

- Targeted investments in infrastructure for upgrading for informal settlements based on specific criteria and priorities such as income, tenure status or disaster risk susceptibility of location.
- Create new service delivery arrangements by engaging the private sector, NGOs and state-owned enterprises and local governments.

Finance

- Improve access to financial services such as microcredit and savings groups in order to improve savings rates, establish creditworthiness and expand financial literacy
- Enhance the ability of lending institutions to develop more flexible lending terms and collateral requirements for small loans.
- Support the development of a competitive market for alternative housing finance products such as housing microfinance or community mortgage programs in order to reduce the cost of finance while allowing incremental housing investment.

C. Harnessing the Formal Housing Sector for Economic Growth

While the formal housing sector in most of the region is small, government support can encourage both the expansion of the formal housing delivery system down market and while at the same time enabling the formal housing sector to become an important driver of the national economy. Presently, most housing investment occurs through household savings or direct government investment, rather than international capital markets. These policy directions are aimed at improving formal lenders' access to capital markets, which will strengthen mortgage markets and increase competition between lenders. Housing delivery also requires the coordination with overlapping sectors; construction firms, real estate agencies, appraisers, property manages and others which face impediments to growth. Allowing banks to

more easily obtain secondary finance improves the variety and accessibility of consumer mortgages and sources of developer finance, which in turn stimulate both local and national economic growth.

Key areas for policy attention include:

Finance:

- Policy and regulatory support for commercial lenders in order to allow access to more liquidity and sources of longer term finance that can be used for commercial or developer finance for housing
- Mortgage and lending laws that improve the operation of commercial banking activities such as loan underwriting, creditworthiness records, collateralization, and foreclosure procedures

Finally, additional research and data are needed to inform housing policy interventions. Low per-capita incomes limit how much many households can spend on housing and, given the plurality of rental, ownership and home construction patterns, a more nuanced understanding of affordability is needed. Research is needed that directly examines the scope and nature of the informal housing sector, including cross-sectoral links to informal water, sanitation and health and informal income generation. This report and the country case studies demonstrate the importance of higher-level country-specific reports and diagnostics to inform policy priorities, rather than city-, project- or exclusive sub-sectoral-level analyses (e.g. of construction or finance).

This report has shown that measures used to assess housing affordability in developed economies may be incomplete or misleading in assessing informal housing in SSA. Policy makers need a regionally-appropriate concept of affordability based on multiple country case studies, and an understanding of the costs to produce different types of housing, how informal housing markets operate in terms of prices, finance sources and volumes. Additional research is necessary to understand how to better identify target groups for different types of housing subsidies, both on the consumer and supply sides, and at different linkages in the value chains in order to improve efficiencies and direct resources to where there is the greatest need. In particular, this would demand a better understanding of the 'middle' population that could be reached by housing microfinance products.

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Appendix 1. Affordability in Sub-Saharan Africa

Definition of Housing Affordability in Sub-Saharan Africa

This report uses two working definitions of 'housing affordability:

Demand-based definition	*Supply-based definition*
Total Cost of Urban Living ≤ 60% of Household Income	Total Cost of Occupancy ≤ Amount paid by a median-income urban household for TCO

Definitions of TCO and TCUL are provided below.

Though both these definitions could be quantified, as the report makes clear, information does not exist to provide reliable estimates of affordable housing supply using either method, a negative finding sufficient for this stocktaking.

The tacit assumptions of developed-world housing affordability metrics

Though 'housing affordability' as a concept is globally comprehensible and locally understood, many local contexts define housing affordability in ways that are not portable from region to region. This makes adopting and using a universal definition difficult.

In developed economies, with relatively efficient housing markets in both supply side (homes) and demand side (mortgage loans), a widely accepted rule-of-thumb sets affordability at 30 percent of household income. In those economies the definition is robust: it applies to the overwhelming majority of households, housing markets, and program definitions. But the rule has implicitly embedded within it a set of assumptions about the similarity of markets across income levels, cities, countries, and regions – assumptions that break down when dealing with:

- *Very poor populations*, many of whom are economic migrants into the city, where non-cash resources are a big part of total value.

- *Rapidly growing cities* with vast informal or peri-urban areas where utilities are absent and hence daily essential utility costs are high.
- *Developing nations* whose governance systems, especially in land and title, inhibit or disable market efficiency and responsiveness.
- *Sub-Saharan Africa* as a region, where land systems and mortgage collateral systems are both in their earliest stages, and where many millions of urban households do not regard a dwelling as a marketable good.

Total Cost of Urban Living (TCUL)

For any household, total monthly expenses divide into five categories: (1) housing/shelter (including basic utilities); (2) transportation (especially the daily commute); (3) food for the family; (4) family necessities (clothing, household goods); and (5) aspirational investments (savings, children's education, income-generation assets).

When very poor people are involved, particularly recent rural-to-urban economic immigrants, the equations are quite different, as illustrated by this schematic table:

Table __

Element of household cost	*Developed-world reality*	*Sub-Saharan Africa reality*
1. Housing/ shelter	Formal home, mortgage	Informal structure, tenure, cash
a. Utilities for the home	Via public networks ('grids')	Off-grid 'last kilometer'
2. Transportation	Cars or public networks (buses)	On foot, or informal 'taxis'
3. Food		Minimized
4. Family necessities		Minimized
5. Aspirational (education)	Free with residency	Costly (paid by family)

Even after one sets aside food and family necessities, which for this purpose can be considered as family costs independent of housing choice, for a poor urban dweller, 'housing' must be priced at a Total Cost of Occupancy that includes utilities and transportation:

Total Cost of Urban Living

for an interval of time

+ Costs of direct occupancy (tenure-based[1])

+ Utilities[2] (water, sanitation, cooking)

= Total Cost of Occupancy (TCO)

+ Transportation (commuting[3])

= Total Cost of Urban Living (TCUL)

[1] If the tenure is rental (formal or informal), the rental charges are payable to a landlord. If the tenure is ownership (formal or informal), the costs are debt service on a home loan (e.g. mortgage) plus local property taxes (aka 'rates').

[2] In Sub-Saharan Africa, home heating is largely incidental and if necessary is a byproduct of cooking. Sanitation may include the cost of external communal or pay toilets.

[3] Round trips from home to place of income generation (including informal such as street vendor stalls) averaging six days a week.

There is good evidence that in fact families globally make decisions based on TCUL; for instance, a solid US study[211] found that:

> Nationally, for every dollar a working family saves on housing, it spends 77 cents more on transportation. … On average, this [CHP] study found that working families in the 28 metropolitan areas spend about 57 percent of their incomes on the combined costs of housing and transportation, with roughly 28 percent of income going for housing and 29 percent going for transportation. While the share of income devoted to housing or transportation varies from area to area, **the combined costs of the two expenses are surprisingly constant.**

As indicated by the foregoing, unlike rural families, for urban families, transportation costs were actually higher than housing costs – in other words, shifting to job-growth centers increased the importance of transportation as a component in ability to pay for, and consumption of, housing.

[211] *A Heavy Load: The Combined Housing and Transportation Burdens of Working Families*, National Housing Partnership's Center for Housing Policy, October, 2006, available at http://www.nhc.org/media/documents/pub_heavy_load_10_06.pdf

Tradeoffs made by poor informally employed urban dwellers in Sub-Saharan Africa

These findings are extensible into other contexts; in particular, poor people who move to cities do so for economic motivations, with several frequently observed consequences and choices:

- Many informally employed urban dwellers walk from their home to their place of daily work;[212] this enables them to pay much higher percentages of income for housing because they are shifting the components of their TCUL, not changing their TCUL.
- Many informally employed urban households also choose deliberately to under-consume housing so as to fit within a manageable spending envelope.[213]
- Many informal entrepreneurs choose to increase their hours of work to improve their income flow for a short period when construction is possible. This may not be possible for long so building incrementally, informally, simple structures, by stages, with cash, suits their needs.
- In tenure situations where ownership cannot be collateralized (that is, a homeowner who cannot access finance, a landlord owner who will not or cannot resell a property, or a rental tenant), there may be economic motivations not to invest in the property, leading to income-constrained housing consumption that is not deducible from statistics.
- Additions to existing properties are, therefore, likely to be popular if finance is available whereas building elsewhere on a planned layout might not be.

Further, housing *size* and housing *consumption* are not income-independent; as a nation's per-capita GDP rises, (a) average household size (people per household) tends to decline and (b) housing consumption (square meters of dwelling area per person) tends to increase. This occurs at different rates so housing consumption across countries[214] cannot be perfectly ordered by their GDP; e.g., Ghana's urban households (GDP per capita = $1,850) consume less housing than Malaŵi's urban households (GDP per capita = $226). Furthermore, dwelling size can increase household size, as relatives seek to capitalize on 'spare' space as a place to stay in the city while free-riding on a household head, which, in turn, reduces household per capita consumption.

Policy implications

1. 'Affordability' as a concept is not binary but a continuum. While 30 percent of income may be a useful norm for stabilized mature economies with functioning supply-side and demand-side housing

[212] Many, especially women, are home-based workers, so their commuting costs are minimal.
[213] Among recent rural-to-urban immigrants, the phenomenon of a geographically separated family is common, with the principal breadwinner working 'in the city' and sending money 'back home' to the village and the family, where the money is invested incrementally in building the family house.
[214] Statistics taken from UN Habitat Housing Sector Profiles.

delivery systems, in emerging countries higher levels of income may be considered affordable, especially in cities with rapid economic expansion leading to rapid urban population growth. Thus a more practical gradation might be the following:

Housing/income	*<25%*	*25-30%*	*30-35%*	*35-40%*	*40-45%*	*>45%*
Affordability	Excellent	Very good	Good	Fair	Burdened	Severe

2. Poor people may be willing to pay more than 30 percent of their income as TCO. The poorest, however, cannot as they need it all for subsistence. They trade off the danger and discomfort of street dwelling against saving the rent, even though 30 percent of their consumption would pay rent for a minimum informal-sector room[215]. For these households, this represents an informed and economically rational choice that represents an investment in their future (or their children's future) at the cost of present discomfort they have decided is temporarily acceptable.

3. Extremely poor people facing high transportation or utility costs will simply do without them, and choose a corresponding housing solution. This may also increase homelessness as a wage-earner may choose, during the work week, to live on the streets close to work.

4. Housing deficit statistics that use formal systems have limited explanatory value because they focus solely on the formal sector, understate the true problem, and lead to cost estimates to cure that are out of reach of any solution remotely feasible in the next quarter-century.

[215] See Graham Tipple and Suzanne Speak, 2009, 'The Hidden Millions: Homelessness in Developing Countries', London: Routledge.

Appendix 2. Overview of Challenges along Supply and Demand Value Chains

INFORMAL		
Type	**Step**	**Challenge**
Supply	0. General	Though the informal sector is much larger and faster at delivering houses than the formal, it is neither adequately studied or adequately resourced.
	1. Land	Land rights are often complicated, ambiguous, or contradictory, and formal land transfer procedures are at best cumbersome and at worst unachievable.
	2. Trunk infrastructure	Many cities have outgrown their infrastructure grids and are growing fast, so infrastructure provision is scarce and lags behind development.
	3. Site layout	Procedures for land subdivision for development or density increase are cumbersome and slow.
	4. Design	As self-built informal housing constitutes the main housing supply of SSA cities, many of these properties are physically substandard.
	5. Risk assumption	In most countries (not Ethiopia), high land costs make purchase or development by informal households financially difficult or impossible.
	6. Construction	Application of formal building code requirements to informal housing or upgrading acts to exclude small-scale contractors and artisans from construction trades.
	7. Offtake	The inability of informal households to secure finance to buy homes discourages developers from building residential property on otherwise suitable plots, instead preferring another use where a bulk offtake is achievable.
	8. Management	Though savings cooperatives are well-established, community management of informal neighborhood infrastructure is rare.
Demand	1. Eligibility	Because housing microfinance requires a different borrower and collateral profile from classical microfinance, there is no clarity around what type of informal household will make a good HMF borrower.
	2. Application	Outreach to informal households depends upon networks of informally employed promoters who are generally unaware of or untrained in HMF.
	3. Subsidy	Government subsidies are generally targeted only to formally employed households.
	4. Credit underwriting	No principles or guidelines exist for how to treat informal property with use value but not resale value in the credit decision for HMF.
	5. Loan closing	HMF loan documentation is not standardized or well established.
	6. Funding	PMIs face a constant liquidity drought and even a portfolio of performing HMF loans is not readily liquefiable.
	7. Loan servicing	As loan servicing requires the promoter to travel to the customer, rather than the customer going to the MFI or bank, these networks are hard to scale and standardize.
	8. Enforcement	Informal assets may be difficult to foreclose and even if foreclosed will have minimal resale value, so other forms of enforcement against collateral need to emerge.

FORMAL		
Type	**Step**	**Challenge**

Supply	0. General	Even within the formal sector, the pace of housing production lags behind the growth in effective demand, leading to scarcity price bubbles in homes and land.
	1. Land	Because land-development loans are rare, land must be acquired for cash, constraining the pace of development.
	2. Trunk infrastructure	Emphasis on physical infrastructure (roads, pipes, wires) tends to distract municipalities from laying down intangible infrastructure such as an arterial system of dirt roads or easements/space reservations for later physical infrastructure.
	3. Site layout	Existing zoning and setback requirements artificially restrict parcel subdivision and densification.
	4. Design	Little effort is being devoted to replacement of legacy building materials with greener or more sustainable materials (e.g. improvements in cementitious products).
	5. Risk assumption	Development finance (such as construction loans) is rare and results in homeowners' having to pay high percentages of eventual home purchase price to reserve an 'off-plan sale', which weakens demonstrable offtake capacity.
	6. Construction	The cost of formal construction is high relative to household incomes and the result excludes smaller and mid-size contractors from scaling up.
	7. Offtake	Programs by employers (whether a private company such as natural resource extraction or public entities such as government workers) to aggregate homebuyers are rare and not encouraged.
	8. Management	Homeowners associations (HOAs) are in their infancy and facilities management is limited to security.
Demand	1. Eligibility	Mortgage and formal banking systems do not reach most of the population.
	2. Application	Primary Mortgage Institutions (PMIs) vary widely in capacity, honesty, and financial strength.
	3. Subsidy	Subsidies are invisible (embedded in land prices, land access, or financing availability) and reach the upper-mille income, not middle- or lower-income households.
	4. Credit underwriting	Because the sector is under-resourced, banks are under little competitive pressure to improve their underwriting and expand the financeable population.
	5. Loan closing	Closing procedures depend on PMIs, whose capacity and consumer-protection vary widely.
	6. Funding	Even successful PMIs face constant liquidity challenges because secondary market liquidity facilities are absent or small.
	7. Loan servicing	Technological innovation such as mobile banking has yet to reach residential loan servicing.
	8. Enforcement	Defects in foreclosure acts or in foreclosure effectiveness make lenders leery of residential mortgage finance and thus also discourages developers from building housing.

Appendix 3. Global Findex Financial Inclusion Tables[216]

COUNTRY TABLE

	Accounts and payments					Saving, credit, and insurance								
	Share with an account at a formal financial institution				Adults using mobile money in the past year	Adults saving in the past year			Adults originating a new loan in the past year					
	All adults		Poorest income quintile	Women		Using a formal account		Using a community-based method	From a formal financial institution		From family or friends	Adults with a credit card	Adults with an outstanding mortgage	Adults paying personally for health insurance
	(%)	SE	(%)	(%)	(%)[a]	(%)	SE	(%)	(%)	SE	(%)	(%)	(%)	(%)
Afghanistan	9	*2.1*	0	3	7	3	*1.1*	3	7	*2.0*	30	1	8	0
Albania	28	*2.1*	7	23	31	9	*1.4*	3	8	*1.3*	11	11	2	11
Algeria	33	*1.8*	22	20	44	4	*1.1*	2	1	*0.5*	25	1	6	4
Angola	39	*3.0*	31	39	26	16	*2.3*	8	8	*1.3*	26	15	4	3
Argentina	33	*1.8*	19	32	1	4	*0.8*	2	7	*0.9*	7	22	0	9
Armenia	17	*1.4*	16	18	4	1	*0.4*	0	19	*1.7*	32	2	1	1
Australia	99	*0.4*	97	99	—	62	*1.9*	7	17	*1.4*	13	64	37	—
Austria	97	*1.0*	93	97	—	52	*2.3*	13	8	*1.2*	6	39	25	—
Azerbaijan	15	*1.5*	13	14	0	2	*0.6*	1	18	*1.5*	27	3	0	1
Bahrain	65	*2.1*	64	49	—	16	*1.6*	25	22	*1.9*	21	19	4	—
Bangladesh	40	*1.9*	33	35	3	17	*2.1*	4	23	*1.9*	11	1	2	2
Belarus	59	*2.6*	37	58	5	7	*1.2*	1	16	*1.7*	39	8	10	3
Belgium	96	*1.0*	92	97	—	43	*2.1*	4	11	*1.2*	5	54	33	—
Benin	10	*1.4*	5	10	0	7	*1.2*	16	4	*0.9*	32	0	0	1
Bolivia	28	*2.2*	12	25	9	17	*1.6*	4	17	*1.7*	8	4	4	4
Bosnia and Herzegovina	56	*3.3*	35	48	2	6	*1.3*	1	13	*1.9*	16	12	4	4
Botswana	30	*2.4*	12	28	9	16	*1.6*	14	6	*1.1*	47	11	1	5
Brazil	56	*2.1*	33	51	1	10	*1.2*	2	6	*0.9*	16	29	1	8
Bulgaria	53	*2.7*	29	55	1	5	*1.2*	0	8	*1.3*	22	10	2	4
Burkina Faso	13	*1.5*	6	11	1	8	*1.2*	8	3	*0.7*	31	1	0	1
Burundi	7	*1.0*	3	6	5	3	*0.6*	2	2	*0.4*	44	1	1	3
Cambodia	4	*0.6*	0	4	1	1	*0.3*	4	19	*1.7*	39	0	2	3
Cameroon	15	*1.9*	14	11	10	10	*1.7*	32	4	*1.4*	45	2	1	1
Canada	96	*0.9*	91	97	—	53	*2.0*	7	20	*1.6*	16	72	29	—
Central African Republic	3	*0.7*	1	3	2	2	*0.5*	10	1	*0.3*	20	1	1	0
Chad	9	*1.7*	6	7	18	7	*1.3*	12	6	*1.9*	31	5	7	1
Chile	42	*2.4*	19	41	2	12	*1.5*	3	8	*1.2*	9	23	4	6
China	64	*2.9*	39	60	2	32	*3.0*	2	7	*0.9*	25	8	5	47
Colombia	30	*2.1*	9	25	3	9	*1.1*	6	12	*1.3*	18	10	3	6
Comoros	22	*1.7*	9	18	4	11	*1.4*	16	7	*1.1*	25	1	1	2
Congo, Dem. Rep.	4	*0.8*	0	3	2	1	*0.5*	8	2	*0.5*	30	2	0	1
Congo, Rep.	9	*1.2*	1	7	37	5	*0.8*	6	3	*0.5*	27	4	0	0
Costa Rica	50	*2.3*	30	41	0	20	*1.6*	15	10	*1.2*	7	12	3	4
Croatia	88	*1.2*	75	87	—	12	*1.3*	2	14	*1.2*	20	35	4	—
Cyprus	85	*1.4*	76	83	—	30	*1.7*	4	27	*1.7*	12	46	23	—
Czech Republic	81	*2.0*	70	81	—	35	*2.1*	1	9	*1.2*	18	26	8	—
Denmark	100	*0.2*	99	99	—	57	*2.1*	4	19	*1.6*	12	45	47	—
Djibouti	12	*1.5*	4	9	7	3	*0.9*	7	4	*0.8*	18	4	5	4
Dominican Republic	38	*2.5*	19	37	8	16	*1.9*	10	14	*1.5*	15	12	2	8
Ecuador	37	*2.4*	22	33	1	15	*1.6*	2	11	*1.5*	15	10	2	3
Egypt, Arab Rep.	10	*1.2*	5	7	1	1	*0.2*	2	4	*0.9*	25	1	2	1
El Salvador	14	*1.4*	1	10	1	13	*1.3*	2	4	*0.8*	6	5	2	1
Estonia	97	*0.8*	94	97	—	29	*2.0*	5	8	*1.0*	25	30	16	—
Finland	100	*0.2*	99	100	—	56	*2.0*	1	24	*1.7*	15	64	30	—
France	97	*0.8*	96	97	—	50	*2.1*	8	19	*1.6*	5	38	27	—
Gabon	19	*1.5*	4	17	50	9	*1.0*	9	2	*0.5*	27	3	0	2
Georgia	33	*2.0*	25	35	2	1	*0.3*	1	11	*1.3*	14	9	1	3
Germany	98	*0.7*	97	99	—	55	*2.1*	4	13	*1.5*	9	36	21	—
Ghana	29	*2.4*	17	27	2	16	*2.0*	10	6	*1.1*	29	2	3	12
Greece	78	*2.3*	75	76	—	20	*1.9*	1	8	*1.0*	20	17	6	—
Guatemala	22	*1.6*	8	16	4	10	*1.1*	4	14	*1.4*	10	7	2	2

[216] Demirguc-Kunt and Klapper, "Measuring Financial Inclusion: The Global Findex Database."

	Accounts and payments					Saving, credit, and insurance								
	Share with an account at a formal financial institution				Adults using mobile money in the past year	Adults saving in the past year			Adults originating a new loan in the past year			Adults with a credit card	Adults with an outstanding mortgage	Adults paying personally for health insurance
	All adults		Poorest income quintile	Women		Using a formal account		Using a community-based method	From a formal financial institution		From family or friends			
	(%)	SE	(%)	(%)	(%)[a]	(%)	SE	(%)	(%)	SE	(%)	(%)	(%)	(%)
Guinea	4	0.7	2	3	7	2	0.5	6	2	0.7	35	1	1	0
Haiti	22	2.5	4	21	15	18	2.2	6	8	1.5	36	2	2	4
Honduras	21	1.6	15	15	3	9	1.0	2	7	0.9	11	5	2	1
Hong Kong SAR, China	89	1.2	78	89	—	43	1.9	3	8	1.1	12	58	11	—
Hungary	73	2.0	58	73	—	17	1.4	2	9	1.1	10	15	13	—
India	35	1.7	21	26	4	12	1.0	3	8	1.0	20	2	2	7
Indonesia	20	2.3	8	19	1	15	2.4	14	9	1.2	42	0	1	1
Iran, Islamic Rep.	74	1.7	63	62	—	20	1.4	6	31	1.7	50	24	15	19
Iraq	11	2.0	5	8	8	5	1.6	6	8	5.7	41	2	15	0
Ireland	94	1.1	88	92	—	51	2.1	9	16	1.5	11	56	32	—
Israel	90	1.6	88	92	—	25	2.3	3	17	2.1	20	80	15	—
Italy	71	2.1	61	64	—	15	1.5	1	5	0.9	3	31	10	—
Jamaica	71	2.5	71	67	8	30	2.6	17	8	1.5	21	7	3	8
Japan	96	1.0	94	97	—	51	1.9	7	6	0.8	5	64	16	—
Jordan	25	1.9	16	17	0	8	1.4	4	4	0.8	26	3	3	1
Kazakhstan	42	2.2	30	44	7	7	1.0	3	13	1.5	31	9	5	2
Kenya	42	3.2	19	39	68	23	2.3	19	10	1.4	58	6	1	5
Korea, Rep.	93	0.9	86	93	—	47	1.8	11	17	1.4	17	56	20	—
Kosovo	44	2.5	24	31	18	5	0.9	1	6	1.2	17	8	2	1
Kuwait	87	2.9	86	80	—	40	6.3	13	21	4.4	18	58	22	—
Kyrgyz Republic	4	0.6	1	4	2	1	0.3	3	11	1.2	26	1	0	0
Lao PDR	27	2.0	16	26	0	19	1.8	8	18	1.7	16	3	1	5
Latvia	90	1.4	82	92	4	13	1.2	2	7	1.0	19	20	8	7
Lebanon	37	2.1	20	26	0	17	1.9	3	11	1.3	12	11	6	8
Lesotho	18	1.8	8	17	7	8	1.1	16	3	0.6	51	2	1	2
Liberia	19	2.2	3	15	19	14	1.6	16	6	1.1	42	3	4	6
Lithuania	74	2.4	66	76	2	20	1.7	4	6	0.8	25	13	6	15
Luxembourg	95	1.0	97	95	—	52	2.0	8	17	1.5	6	72	34	—
Macedonia, FYR	74	2.2	66	72	16	8	1.0	1	11	1.5	24	17	4	6
Madagascar	6	0.9	1	5	1	1	0.3	0	2	0.5	58	0	1	0
Malawi	17	1.4	9	17	1	8	1.1	10	9	1.2	44	1	5	0
Malaysia	66	2.7	45	63	3	35	2.2	7	11	1.5	20	12	13	16
Mali	8	1.1	4	7	1	4	0.8	12	4	0.8	24	1	1	1
Malta	95	0.8	93	94	—	45	1.8	3	10	1.1	5	53	18	—
Mauritania	17	2.0	7	12	19	6	1.0	4	8	1.5	34	4	5	2
Mauritius	80	1.8	66	75	9	31	2.5	6	14	1.4	6	14	5	10
Mexico	27	2.6	12	22	6	7	1.5	5	8	1.2	15	13	3	8
Moldova	18	1.3	6	17	6	4	0.7	2	6	0.8	42	2	1	2
Mongolia	78	1.7	68	82	8	23	1.9	3	25	2.0	16	2	3	3
Montenegro	50	3.1	34	49	5	3	0.8	2	22	2.3	35	14	4	4
Morocco	39	2.9	—	27	10	12	1.0	9	4	0.6	41	4	5	5
Mozambique	40	2.5	21	35	3	17	2.1	23	6	0.9	35	4	1	4
Nepal	25	2.1	15	21	0	10	1.4	6	11	1.6	33	1	5	2
Netherlands	99	0.4	98	98	—	58	2.2	4	13	1.6	7	41	40	—
New Zealand	99	0.2	100	99	—	60	1.8	9	27	1.6	17	59	35	—
Nicaragua	14	1.6	4	13	2	7	1.3	3	8	1.0	4	2	0	1
Niger	2	0.5	0	1	3	1	0.4	9	1	0.4	43	0	1	0
Nigeria	30	2.2	12	26	13	24	2.0	44	2	0.6	44	1	1	0
Oman	74	1.6	63	64	—	23	1.5	14	9	1.1	33	27	14	—
Pakistan	10	1.2	5	3	3	1	0.5	3	2	0.5	23	1	2	1
Panama	25	1.9	18	23	0	12	1.2	7	10	1.2	17	11	11	5

	Accounts and payments					Saving, credit, and insurance								
	Share with an account at a formal financial institution				Adults using mobile money in the past year	Adults saving in the past year			Adults originating a new loan in the past year			Adults with a credit card	Adults with an outstanding mortgage	Adults paying personally for health insurance
	All adults		Poorest income quintile	Women		Using a formal account		Using a community-based method	From a formal financial institution		From family or friends			
	(%)	SE	(%)	(%)	(%)[a]	(%)	SE	(%)	(%)	SE	(%)	(%)	(%)	(%)
Paraguay	22	*2.1*	4	23	7	10	*1.7*	2	13	*1.6*	15	9	1	6
Peru	20	*1.6*	6	18	4	9	*1.1*	4	13	*1.5*	14	10	1	4
Philippines	27	*2.6*	4	34	15	15	*1.8*	7	11	*1.0*	39	3	4	5
Poland	70	*1.8*	60	68	—	18	*1.4*	1	10	*1.1*	13	18	3	—
Portugal	81	*1.7*	64	78	—	26	*1.8*	2	8	*1.2*	7	30	23	—
Qatar	66	*1.9*	47	62	—	25	*1.6*	9	13	*1.2*	31	32	19	—
Romania	45	*2.7*	25	41	1	9	*1.0*	0	8	*1.1*	18	12	4	6
Russian Federation	48	*1.6*	34	48	3	11	*1.0*	1	8	*0.8*	23	10	1	7
Rwanda	33	*2.7*	23	28	4	18	*2.4*	4	8	*1.4*	28	3	2	5
Saudi Arabia	46	*1.8*	32	15	—	17	*1.7*	4	2	*0.5*	26	17	12	—
Senegal	6	*1.0*	4	5	1	4	*0.7*	5	4	*0.8*	26	1	0	1
Serbia	62	*2.1*	47	62	3	3	*0.7*	3	12	*1.4*	29	23	1	4
Sierra Leone	15	*1.9*	4	13	2	14	*2.1*	10	6	*1.0*	43	2	0	1
Singapore	98	*0.6*	98	98	—	58	*1.9*	0	10	*1.1*	16	37	19	—
Slovak Republic	80	*1.9*	66	79	—	37	*2.1*	2	11	*1.5*	18	20	7	—
Slovenia	97	*0.7*	92	98	—	29	*1.8*	6	13	*1.3*	13	39	10	—
Somalia	31	*2.2*	12	27	34	14	*1.7*	9	2	*0.5*	26	1	5	0
South Africa	54	*2.3*	35	51	11	22	*1.9*	14	9	*1.3*	34	8	4	7
Spain	93	*1.1*	91	92	—	35	*1.9*	2	11	*1.3*	12	42	32	—
Sri Lanka	69	*3.3*	52	67	3	28	*3.6*	9	18	*2.5*	13	4	4	8
Sudan	7	*1.2*	4	4	52	3	*0.6*	9	2	*0.5*	47	1	6	9
Swaziland	29	*2.4*	12	27	20	18	*2.0*	8	12	*1.4*	51	13	6	8
Sweden	99	*0.5*	99	99	—	64	*2.0*	6	23	*1.8*	12	54	54	—
Syrian Arab Republic	23	*1.6*	20	20	0	5	*0.7*	1	13	*1.2*	20	3	5	10
Taiwan, China	87	*1.4*	77	88	—	46	*1.9*	5	10	*1.1*	7	46	21	—
Tajikistan	3	*0.6*	1	2	29	0	*0.1*	2	5	*0.9*	25	1	0	1
Tanzania	17	*1.6*	3	14	23	12	*1.3*	8	7	*1.0*	46	4	4	3
Thailand	73	*2.9*	64	73	3	43	*3.5*	5	19	*3.4*	8	5	5	24
Togo	10	*1.2*	2	9	1	4	*0.7*	4	4	*0.7*	19	1	2	1
Trinidad and Tobago	76	*2.9*	70	70	—	44	*3.5*	10	8	*1.4*	11	15	1	—
Tunisia	32	*2.2*	14	25	0	5	*0.8*	2	3	*0.7*	21	4	2	6
Turkey	58	*2.0*	46	33	5	4	*0.9*	1	5	*0.9*	43	45	1	4
Turkmenistan	0	*0.1*	0	1	0	0	*0.1*	1	1	*0.3*	26	0	1	0
Uganda	20	*2.0*	7	15	27	16	*2.0*	19	9	*1.2*	46	2	1	1
Ukraine	41	*2.4*	21	39	12	5	*1.0*	2	8	*1.3*	37	19	1	2
United Arab Emirates	60	*2.2*	57	47	—	19	*1.8*	5	11	*1.7*	24	30	18	—
United Kingdom	97	*0.7*	97	98	—	44	*2.0*	5	12	*1.3*	14	52	31	—
United States	88	*1.4*	74	84	—	50	*2.0*	6	20	*1.5*	17	62	31	—
Uruguay	24	*1.9*	7	24	1	6	*0.9*	1	15	*1.6*	6	27	2	9
Uzbekistan	23	*1.8*	15	21	6	1	*0.3*	4	1	*0.4*	12	3	0	1
Venezuela, RB	44	3.8	27	36	3	14	2.2	6	2	0.5	10	10	0	6
Vietnam	21	3.2	6	19	7	8	1.5	5	16	2.4	31	1	3	18
West Bank and Gaza	19	1.9	8	10	4	5	0.9	3	4	0.9	42	4	5	5
Yemen, Rep.	4	0.7	0	1	2	1	0.2	3	1	0.3	45	0	1	0
Zambia	21	1.9	8	23	5	12	1.3	7	6	1.1	42	4	1	1
Zimbabwe	40	2.0	22	37	4	17	1.7	11	5	0.8	57	6	1	15

— = not available.
Note: Complete data can be found on the Global Findex Web site (http://www.worldbank.org/globalfindex).

Appendix 4. 16 Types of Housing Affordability Tools

What is a Housing Affordability Tool?

A **Housing Affordability Tool** is a quantity of material value that is (a) relevant to the construction, development, or operations of housing, (b) used for the purpose of improving the housing's affordability (either price or ongoing cost of occupancy), and (c) provided by a benefactor (charity, socially-motivated private company, or unit of government).

They're called *Tools* rather than *Money* because half of them *are not cash*; instead they are quantities in kind[217] that can be turned into money through financing.

They're used to close the financing gap between (a) the cost of construction, development, or operations of the housing and (b) the value of the housing. Affordable housing normally costs as much (per square meter) as conventional housing but it has less economic value because it is being delivered to low-income people at a price or rent that they can afford.

Term	*Definition*	*Example*
Non-cash tools	Resources of value that are not cash but in kind	
1. Land	Provide land for free or using expropriation, eminent domain, or other ability to make land available for new residential development at zero or reduced cost.	Boston, through the Boston Redevelopment Authority, donates or sells at a subsidized cost land parcels to developers that will develop affordable housing. See more here: http://www.bostonredevelopmentauthority.org/opportunities-properties/bra-owned-land . Similar programs exist in New York City and elsewhere around the world.
2. Zoning and density	Increase density (compared with normal density), such as by allowing taller buildings, higher floor-area-ratio, or change in zoning, so that the cost of land *per square meter of aggregate residential space* is reduced.	Inclusionary zoning is used in many cities in the United States. See examples here: http://www.huduser.org/portal/periodicals/em/spring13/highlight3.html. Mumbai uses Transferable Development Rights, which are permission to build higher FAR (Floor-Area-Ratio). See more here: http://www.sdmarchitects.com/building-regulations-in-mumbai.html

[217] Paid or given in goods, commodities, or services instead of money.

Term	*Definition*	*Example*
3. Trunk infrastructure	Connect housing development to the public network at zero or minimal cost, thereby reducing development costs.	In the Asia-Pacific region, governments have begun using component-sharing models, whereby they provide trunk infrastructure to a community and the community build its own site infrastructure. See more here: http://www.habitat.org/sites/default/files/ap_Poverty_Housing_In_The_Asia_Pacific_Report_4.pdf
4. Site infrastructure	Provide private developers with site infrastructure (that is, infrastructure within the site) at reduced or no cost.	The most common approach is where a developer improves a large tract of land (to become a homeowners' association, for example) and lays out internal roads together with water, sewer, and electrical networks, all of which is delivered by the municipal utility or department of public works and not charged to the owner.
5. Cheap/ free utilities	Reduce the cost of necessary utilities to reduce operating expenses associated with property management.	Massachusetts residents can get utility discounts and utility shutoff protection. See more here: http://www.massresources.org/energy.html. Many nations charge different electricity or water rates based on the type of property usage (e.g. residential homeowners pay less).
6. Credit enhancement	Assume financial risk (typically, by guaranteeing payment of the property's loan) in order to enable the private sector to lend otherwise risky counterparty (homeowner or developer) for the development, improvement, or purchase of housing for lower-income households.	The US Federal Housing Administration (FHA) provides payment insurance on mortgages across both single-family and multifamily programs. One example if FHA Section 203(k), for home owners and home improvers. http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/sfh/203k/203kmenu. Mortgage guarantee funds are used around the world.
7. Tax relief (VAT, sales)	Incentivize developers to build by decreasing their sales tax or value-added tax (VAT) on building materials.	In the UK, developers of affordable housing can be exempted from VAT for homes or building materials, which can save up to 20% of the cost of property construction. http://www.insidehousing.co.uk/follow-the-golden-brick-road/6504911.article

Term	*Definition*	*Example*
8. Ongoing real estate tax abate-ments	Reduce the ongoing or annual real estate taxes (sometimes called 'rates') on ongoing property or land use to support the long-term affordability of housing.	In the U.S., real estate taxes are determined by local governments and governed by state law. In Florida, for example, all real estate owned by non-profit entities is exempt from real estate taxation. http://www.flsenate.gov/Laws/Statutes/2012/196.192
Cash tools	Types of money (actual cash) provided as subsidy or as part of financing (source of capital funds)	
1. Grants	Give money, in a lump sum (and usually up front) directly to public- or private-sector entities to develop, acquire, renovate, rent, or operate housing.	The U.S. Department of Housing and Urban Development (HUD) provides grants to localities to fund the development of affordable housing. http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/programs/home/ Also, Section 202, for instance, provides cash grants to non-profits to build elderly rental housing. http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/mfh/progdesc/eld202. The UK's social-housing delivery system is predominantly grant-based: http://www.homesandcommunities.co.uk/affordable-homes.
2. Hard debt with high gearing/ leverage	Provide debt with high leverage (greater loan-to-value ratio) so that any given amount of monthly payment will support a bigger capital outlay. These can be supply-side (provided to developers to build, renovate, or buy) or demand-side (provided to particular classes of worthy homeowners).	Supply side: U.S. Section 221d4 allows developers of new or substantially rehabilitated property to borrow up to 90% of cost: http://www.arbor.com/fha-221d4/. Demand side: the U.S. Veterans Administration (VA), for example, allows honorably discharged veterans to borrow up to 100% of the cost of a home: http://benefits.va.gov/homeloans/purchasecashout.asp

Term	*Definition*	*Example*
3. Hard debt with internal subsidy	Lend money at an interest rate lower than market, and hence 'take a loss' compared to the conventional alternative. Again, this can be supply-side (loan to developer to build or buy) or demand-side (loan to home buyer).	In the U.S., developers of affordable housing can be allocated 'tax exempt bond authority,' whereby interest paid on their bonds is not taxable income to the bondholder; the result is lower interest rates than available if the bonds are taxable. https://www.ncsha.org/advocacy-issues/housing-bonds. In Mongolia, commercial interest rates run as high as 16%, but home buyers can borrow at 8% fixed. Brazil has multiple similar programs operated by Caixa Economica Federal whereby eligible customers gain access to financing for particular purchases, not always limited to housing: http://online.wsj.com/article/BT-CO-20130617-706124.html
4. Soft debt	Offer loans to the low-income market whose repayment is deferred, not mandatory, and instead depends on the asset's economic performance (e.g. cash flow, eventual refinancing or sale). Alternatively, build in an incentive within loan products for eligible households, such as forgiving part of the debt when certain performance levels or triggers are reached.	Massachusetts provides loans for low-income households or developers of low-income housing that it then forgives at a certain point. See more here: http://www.mhp.net/homeownership/homebuyer/ Massachusetts offers a 'soft second mortgage' loan program which combines with a high-gearing first mortgage to offer 3% down, 77% in hard debt, and 20% in soft debt. http://www.mass.gov/hed/economic/eohed/dhcd/fact-sheets/ssl.html.
5. Hard equity	Provide cash equity to a developer in exchange for part or full ownership of the property.	For this to result in affordability, the cash-equity provider must be willing to accept a below-market return on its equity. A common approach is Program-Related Investments (PRIs) used by major philanthropies in the U.S. and elsewhere. http://www.cdfifund.gov/what_we_do/resources/Feb%202011%20PRI%20Primer.pdf

Term	*Definition*	*Example*
6. Soft equity	Invest equity capital that does not require a cash return to be economically sound for the investor, because the investor receives governmentally-authorized and approved tax benefits that have value independent of the property's real estate performance.	The Low Income Housing Tax Credit (LIHTC) functions as soft equity. See more here: http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/training/web/lihtc/basics
7. Operating subsidy	Provide a direct cash subsidy to the owner (landlord) to make up shortfalls in revenue because low-income people pay means-tested affordable rents.	In the U.S., public housing is funded with operating subsidies that 'tops up' the resident payments and in theory allows the property to achieve positive cash flow. http://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/programs/ph/am/of/opfnd2014. For privately-owned and -regulated affordable housing, Project Based Rental Assistance (PBRA) operates in a similar fashion. http://portal.hud.gov/hudportal/HUD?src=/recovery/programs/project.
8. Re-directive subsidy	Use funds from a non-related source of income for the development of affordable housing (such as subsidizing affordable units with sales profits from market units within the same development)	In Mumbai, railway travelers were assessed a 1 rupee surtax on their tickets to pay for the cost of re-housing slum dwellers who were resettled after the railway took a ten-meter right of way on either side of the tracks through the slums. See more here: http://affordablehousinginstitute.org/blogs/us/2010/03/housing-options-in-india-part-2-consciously-created-affordable-housing.html. In Sao Paulo, the World Bank funded a massive slum-upgrading/public infrastructure project to reduce sewer runoff into the Guarapiranga reservoir. The project was financed with a bond issue whose repayment depended, in part, on a 'clean water' surtax assessed by the state-owned water company (SABESP) on all residents. http://affordablehousinginstitute.org/blogs/us/2008/06/favelas-of-sao-paulo-part-2-guarapiranga.html.

Appendix 5. Detailed Recommendations implied by Value Chain Analysis

Definition of optimality

As optimality is in the eye of the beholder, the World Bank needs a definition that can be applied consistently across multiple decisions, sectors, and countries. The following is an enumeration of the elements against which the World Bank chooses interventions:

1. The World Bank provides both *concessionary capital* and *structured advice*. Hence the Bank operates like a social venture capitalist, and its capital should aim to address market failures, systemic weaknesses, or missing or under-strength links in the relevant national value chains.
2. By agreement, the Bank only pursues interventions that are specifically requested by the host countries, and its capital is provided as loans to the sovereign national government (usually via the Ministry of Finance); thus the Bank is limited in its ability to direct where capital goes after the borrower has received the funding. Typically, the Bank's capital provision results from a fact-finding mission, requested by the host country, and results in a negotiated or structured capital placement.
3. The Bank's counterparties (i.e. borrowers) are sovereign national governments, and the Bank may contract with or provide funding to sub-sovereign entities (e.g. provincial or local governments) via a national-to-provincial-to-local conduit approach.
4. The World Bank's engagement with a country is not limited to a single intervention, sector, or time; instead the Bank provides funding and technical assistance steadily across the years and decades, across many sectors, and with many individual initiatives. Each intervention should thus be seen as an investment within a larger 'portfolio' strategy (e.g. capital to a country that is then subdivided between supply and demand, informal and formal).
5. For the World Bank or other Development Finance Institutions (DFIs), every intervention has a potential post-action *benefit* (potential improvement and long-lasting impact) and a pre-action *cost* (effort to change, stakeholder resistance, risk of failure).

With these elements as the backdrop, this paper adopts the following definition of 'optimal' interventions. An optimal intervention should follow at least one – and most likely more than one – of these elements:

Optimal interventions: Elements to consider in the housing sector

1. Uses capital plus advice in contemporaneous combination to jump-start change that would not happen without this intervention by the Bank (or a similar DFI).
2. Addresses market failures, market omissions, or unformed value-chain links that are not being created because they face establishment costs or blockages.
3. Is supported by evidence-based analysis of the country's housing delivery system and value chains.
4. Has a 'maxi-min' benefit-to-cost ratio (consistent with the foregoing discussion).
5. Minimizes the risk of economic failure of the venture itself.
6. Reduces the risk of 'leakage' (money lost, wasted, diverted, or stolen).
7. Minimizes the risk of distorting the emerging market economy (including the informal economy).
8. Can be successfully implemented by the host country (that is, with the current value chain systems, government and private market capacity).
9. Minimizes the risk of political failure (market capture, deadweight delivery).
10. Favorable changes to the housing delivery system that to make it possible to do later other interventions that are not possible now.
11. 'Does no harm' to bottom-up, self-governed, or informally organized pro-poor initiatives emerging within the country itself.
12. Generates useful and reliable data, especially with regard to lower-income or informal market segments that are under-reported and under-studied locally.

This report changes that by deliberately analyzing the informal housing sector (both supply side and demand side) in parallel with the formal, and using the same typological methodology. While data limitations, particularly in the informal sector, are appropriately caveated, tentative conclusions are based on best judgment from global experts using best available data.

From the country to the region:
Extrapolation and evidentiary citation

Each country's housing sector is complex, each one is unique, and hence even evidence-based solutions that may be applicable regionally will always need tailoring to individual national circumstances. Further, this report extrapolates to regional policy interventions based on the specific circumstances found in the three countries studied: Nigeria, Cameroon, and Ethiopia. So that regionally implied interventions will be grounded, each will be cited parenthetically (country name); particulars can be found in that country's individual section.

A. Overview of policy recommendations by value chain

INFORMAL		
Type	**Step**	**Challenge**
Supply	1. General	Acknowledge 'informal income, informal tenure' as market-responsive sectors that are worthy of World Bank-funded housing-related initiatives.
	2. Land	Encourage and support funding of pilots that allow for judicially-accepted division of land rights that are short of formal land transfer evidenced by changes of title.
	3. Trunk infrastructure	Encourage and support planning and expansion of informal peri-urban areas by laying out the area with room to add public trunk infrastructure after the private infrastructure of informal housing and business is in place.
	4. Site layout	Encourage authorization of informal institutions as quasi-judicial and judicially-compatible adjudicators of the subdivision of land for development compatible with rapid urban growth.
	5. Design	Incentivize and fund both technological innovation in cementitious materials and other more sustainable building products, and pilot partnerships between pro-poor buildings-materials companies and governmental/NGO institutions to create hybrid value chains that deliver sustainable building products for self-build uses.
	6. Risk assumption	Facilitate judicial and financial innovation via the development of pre-purchase land options or other forms of 'site control' that enable developers to plan property development without buying the property in advance.
	7. Construction	Support development of a 'building code light' that grants exemptions from building requirements for small and lower-density properties (e.g. retrofitting an informal home into potential formality).
	8. Offtake	Incubate and fund capacity-building for 'group owners' that are formal entities whose members or beneficiaries are or may be wholly informal, so that these entities can be bulk buyers of higher-density properties.
	9. Management	Explore hybrid value chains that solve the 'last kilometer delivery' problem by connected formal utility providers to intra-informal-neighborhood networks or delivery agents.
Demand	1. Eligibility	Develop an effective typology of informal assets and a similar definition of a Qualified Informal HMF Borrower, which can be used across multiple countries in Sub-Saharan Africa.
	2. Application	Recognize, study, document, and replicate the promotora/saathiben model of informally-employed agents as neighborhood-based HMF originators, application-facilitators, and subsequent loan servicers.
	3. Subsidy	Allow member-based and qualified non-bank co-operatives to use their deposits as a capital source for intra-cooperative-member lending.
	4. Credit underwriting	Support and widely promulgate the principles of housing microfinance and Home Asset Loan Financing (HALF).
	5. Loan closing	Encourage standardization of HMF loan products through regulatory safe harbors.
	6. Funding	Conduct a region-wide study of cooperative-based, proto-credit unions such as *tontines*, *iddirs*, and *stokvels*, and assess whether these can be scaled into a proprietary and favorable funding sources for HMF lending.
	7. Loan servicing	Connect MFIs and HMFCs to mobile-banking and mobile-telephone companies, and support the funding of open-source software applications that enable people to pay HMF loans via mobile phone or methods.
	8. Enforcement	Develop positive-deviance examples of enforcement mechanisms that use non-mortgageable collateral or deprivation of home occupancy use instead of foreclosure and resale of the real estate collateral.

FORMAL		
Type	**Step**	**Challenge**
Supply	1. Land	Streamline land entitlement procedures and land transfer procedures, and recognize that cadastral upgrades that work well in a rural (one-story) environment) must be retooled for the urban (multi-story) environment.
	2. Trunk infrastructure	Encourage and support expansion-planning grid or arterial layouts of rapidly growing cities so that the framework of informal settlement and private informal investment allows space for later retrofitting of physical infrastructure grids.
	3. Site layout	Authorize quasi-judicial and traditional means of subdividing land plots for multi-household use.
	4. Design	Reform antiquated building codes and structural requirements that were enacted before modern sustainable building materials were invented, and that now may protect local building-materials monopolies.
	5. Risk assumption	Create domestic national-level and state-level development-finance products and lending as a recognized commercial banking activity, in many ways more important than even liquidity facilities.
	6. Construction	Endorse consumer-protection laws regarding off-plan sales.
	7. Offtake	Encourage employer-assisted housing through employer-based provident funds, deduction-at-source payment methods, and means whereby corporations are incentivized to intermediate either (a) potential informality or defects in the formality of title/zoning/building code or (b) some of their employees' default risk so as to lower their employees' cost of mortgage finance.
	8. Management	Support the import of developed-nation expertise in multifamily property management and homeowners' associations (HOAs) for adaptation to local contexts.
Demand	1. Eligibility	Strengthen credit bureaus and require fair-credit-reporting transparency of credit information.
	2. Application	Build origination capacity in PMIs and support the use of web-based open-source pre-underwriting and credit-scoring software applications.
	3. Subsidy	Identify and make visible 'hidden' subsidies and require any such subsidies to have effective targeting so that they are not captured by the middle class or subject to 'upward drift' (where the subsidy is theoretically open to all but in practice awarded only to the upper-middle class because others do not qualify on credit grounds).
	4. Credit underwriting	Build credit bureau capacity.
	5. Loan closing	Professionalize the role of individual, loan originator as distinct from banker or credit underwriter.
	6. Funding	Continue to support, establish, capitalize and improve national-level secondary-market liquidity facilities, products, and entities.
	7. Loan servicing	Support (aggressively) partnerships between domestic banks and mobile-telephone and mobile-banking companies.
	8. Enforcement	Encourage government housing finance bodies to intermediate 'non-commercial' risk by creating performance-guarantee insurance.

B. The informal housing delivery system and its value chains:

B.1. Supply side: Creating more and better informal and formalizable homes

Every country surveyed faces a substantial housing deficit, and even the reported figures conceal the true extent of the problem, because:

- Deficits are normally measured at a national level, and take no account of the rapid and one-way rural-to-urban migration within Sub-Saharan African countries.
- Supply-side figures may overcount because they include informal homes, either directly through mistaken counting (house physically formal but legally informal) or indirectly by counting households reporting inadequate housing, and make little allowance for the unsatisfactory structural or physical nature of many of these homes.
- Household sizes are large, and there is some evidence that this 'cultural norm' is an acquired behavior resulting from poverty and consequent overcrowding. As per-capita income rises, households form faster and are smaller.
- The preferred size of housing likewise expands as per-capita-income rises; what is adequate today will be inadequate in ten years, even if it is physically the same housing. This is a particular challenge in countries building high-rises with cementitious materials, as these are among the most difficult to retrofit into other floor plans (or to add plumbing to unplumbed concrete-framed rooms).[218]

Overall, therefore, it is imperative to do everything possible to motivate new production of housing at all income levels, to provide accelerants for the physical expansion of existing small-sized informal housing, and to create pathways by which informal housing can be progressively formalized (along the legal-formality continuum referenced above). Accordingly, all housing-related policy in the studied countries and throughout Sub-Saharan Africa should be evaluated in part based on its ability to enable supply of rental housing, not only as new purpose-built stock but also within owner-occupied housing through extensions. (Ethiopia)

B.1.1 Supply-side value chains: Land.

Policy recommendation: Encourage and support funding of pilots that allow for judicially accepted division of land rights that are short of formal land transfer evidenced by changes of title.

Within Sub-Saharan Africa, even the formal land markets are subject to numerous weak or missing links: blockages, land hoarding and land cartels, overlapping systems in force, and other disruptions that make formal urban development problematic. Because urban growth is happening whether it is legal or not, the result is a significant increase in the 'market share' of Sub-Saharan African land markets that are informal.

[218] Although it does occur surprisingly often worldwide, see: Tipple, Graham, 2000, *Extending Themselves: User Initiated Transformation of Government-built Housing in Developing Countries*, Liverpool: Liverpool University Press

Hence, it is critical to develop property rights, with particular emphasis on instituting less-costly titling systems. (Ethiopia, Nigeria)

Further, the property rights that are often clear and secure in developed economies, which can include 'freehold' can be subdivided, legally or contractually, in ways that could foster development without directly assaulting establishing laws or practices. Fewer rights also guard against raiding by better-off households while giving enough rights for secure informal development. The divisible components of land rights relevant to housing include:

1. Right of current occupancy (whether on payment of a cash sum up front, for a lease interval, or periodically).
2. Right to lease or sublease occupancy and use rights without transferring land ownership or registering an updated title.
3. Right to subdivide or partition a larger site for purposes of use, occupancy, or development.
4. Right to construct permanent dwellings on a site.
5. Right to increase density on a site by constructing ancillary outbuildings ('backyard shacks')[219].
6. Guarantee of non-eviction for a stated interval of time.
7. Right to pledge the foregoing rights as collateral for a debt.

These 'rights-divisible' initiatives, however, are largely unexplored because land markets operate on the principle that freehold or long leasehold is the goal and therefore should be the standard of land transfer; such a standard serves well in the formal markets (both supply and demand) and hence is naturally preferred and supported legislatively and through the political and judicial processes – an example of the adage that the best is the enemy of the good.

In its Annual Report 2013, Shelter-Afrique recommends: *"In order to realise the full potential of the housing market, the government should continue with the land reforms."*[220] (Cameroon)

Instead of formal land transfer, informal or historically cultural or tribal-based land-transfer mechanisms are prevalent. These are not 'title' in a form recognized by the formal system (e.g. for a mortgage), but are broadly respected as rights of occupancy, construction/development, and use. In several of the studied countries, there is an obvious failure to acknowledge the real power and influence that the traditional heads have over the land management and subdivision process. The first step is to recognize this and agree some kind of compact based on this. This would allow the heads, through the local government system, to take on the role of allocating land formally, as long as it conforms to the requirements of a metropolitan land use plan and the formal land registration process. (Nigeria)

In some countries, local chiefs operate in parallel with, or as *de facto* agents of the local government officials. It would be less complicated transitioning their informal or customary land activities into some form of formally recognized framework than introducing a new set of formal-sector 'professionals' into the value-chain. This could be further strengthened by upgrading the technical input available to chiefs by educating and providing registration/licensing to the existing cadre of intermediary professionals to execute their job better and according to a formally recognized process. Transitioning these individuals,

[219] Such rights, if available, also raise building-code and property-standards issues, but those are unrelated to the land-rights issue. The Lesotho Development Control Code specifically allows the local equivalent of backyard shacks up to the same area as the main dwelling.
[220] Shelter-Afrique, "Shelter-Afrique: 2013 Annual Report and Financial Statements."

who have plenty of deep and proven local knowledge, into some form of formally recognized framework would be much more cost-effective (and locally accepted) that seeking to introduce a new set of land, housing and finance specialists who may have formal university training, but limited understanding of typical constraints and expectations faced by the informal sector. (Nigeria, Ethiopia)

In effect, this approach would be to sail with prevailing winds of current and historical land management processes in the respective states/cities, rather than fighting them by attempting to impose a system based on the formal land laws per se.

The likely potential change vector for formalizing informal land might be to start first with a recognition of facts on the ground by allowing some form of "homestead amnesty" – that is, grant of non-eviction rights for a period of time, possibly indefinite, upon condition that the occupant live in the house and improve it to a certain standard by a certain deadline. This could start in a sub-national unit of government, e.g., province, region or district, as a pilot. In Nigeria, states where there is already similar activity going on[221] could lead the way, such as Kaduna/Kamazou, Kano/Dilalai (informal land agents), or Enugu/Nike (indigenous, original land owners). (Nigeria)

B.1.2. Supply-side value chains: Trunk infrastructure

Policy recommendation: Encourage and support planning and expansion of informal peri-urban areas by laying out the area with room to add public trunk infrastructure after the private infrastructure of informal housing and business has already sprung up.

As documented in all three country case studies, Sub-Saharan African cities are growing fastest in peri-urban locations around the urban core, creating a phenomenon by which one can become urban without moving. The transformation from rural to urban, without relocation, means that the informal neighborhoods are places where private investment has outrun public infrastructure.
These locations have several defining characteristics, among which are that:

- They were never anticipated to be urban, and are often zoned agricultural.
- They have shifted from rural to urban in a very short period, e.g., ten years.
- They are continuing to grow extremely quickly, outstripping conventional political-response cycles.
- They have long since grown beyond any established urban trunk-infrastructure grids, creating systems overload at the utility, political, and judicial levels.

The consequence is self-generated and low-cost infrastructure: streets are dirt and are neither paved nor graded; water is delivered in bottles, jerry cans or tins; sanitation occurs in plastic bags, outhouses and community toilets; and electricity is often stolen through informally-wired hookups. This 'organic extension' of the infrastructure grid poses significant problems for policy makers[222], as the business case for extending the infrastructure grid into rapidly-growing peri-urban areas is not feasible:

[221] Even Abuja has acknowledged the place of original inhabitants, by not demolishing their 'illegal' settlements.
[222] India's July, 2012 blackout, which left 300+ million people without power for up to two days, was triggered in part because in that country roughly 15-30% of all electricity is stolen via similar informal/ illegal wiring. See http://www.csmonitor.com/Commentary/the-monitors-view/2012/0802/India-blackout-flips-a-switch.

- The financial costs are higher than a greenfield grid because retrofitting is required.
- The normal revenues from poor people are too little to generate the net cash flow to pay the debt service on even a concessionary loan for infrastructure upgrading.
- The informal value chains (e.g. water sellers, night-soil men) who address infrastructure in an informal community will resist formalization, seeing this as competition that will put them out of their jobs.
- Revenues to be received from the newly connected poor people are difficult to underwrite because the poor must be persuaded to give up their informal sources in favor of formal sources.

For municipalities, these development economics will not reverse themselves for many years. Expansion of the trunk infrastructure will continue to flow to the higher-value sections of the city, rather than to the peri-urban areas. If a peri-urban area becomes suddenly much more valuable (owing to locational improvement as a consequence of urban growth), then the likeliest real-estate-market consequence will be redevelopment via density-increase by displacing/evicting all the peri-urban dwellers, clearing the site, and erecting mid-rise or high-rise structures aimed for much higher socioeconomic classes or commercial uses.[223] The result may be good economics for the city, but is of course grossly unfair to the peri-urban residents and simply displaces them to another adversely selected growing area.

If well-located peri-urban neighborhoods are to be upgraded without wholesale clearance and relocation, then concessionary capital for the infrastructure emplacement must be coupled with community-responsive pro-poor resident engagement. Such processes are feasibleu and are stronger if supported by national law (e.g. India's Slum Relocation Act).

B.1.3. Supply-side value chains: Site Layout (including subdivision)

Policy recommendation: Encourage authorization of informal but respected people and institutions (tribal, customary, or historically recognized) as quasi-judicial and judicially-compatible adjudicators of the subdivision of land for development compatible with rapid urban growth.

As discussed in the section on formal supply-side development, land-use requirements (such as minimum lot size) and land-transfer hurdles (such as Nigeria's requirement that the State Governor must personally sign land transfers) not only make formal housing more expensive, they are an open invitation to try informal routes of land acquisition and housing provision. Addressing this is imperative if auto-promotion (self-improvement, incremental formalization) is to be regularized, as plots are the basis for such new housing construction. (Cameroon)

Increasing density in the peri-urban area depends in part on homesteaders upgrading their plots with larger structures that will support a living environment for more people. Thus sites that were designed as 'single-family homesteads' in the formal zoning or land cadaster will be subdivided or incrementally developed, and for that they must have site infrastructure – pipes and wires from the property's lot lines to the structures on the site. That, in turn, requires some form of acknowledgment by applicable local authority that the subdivision is tolerable and even desirable.

[223] This model is prevalent in the emerging world now (for a current example, see Tarlabasi in Istanbul) and was a sorry chapter in the history of Paris, London, and various US cities, particularly during the 1950s and 1960s.

The rapid informal expansion of Nigerian cities is unplanned and unserviced, but remarkably robust and solidly built – there is relatively little poor-quality construction (generally) and there is a well-established, if questionably formalized and integrated, land administration system (community/chief moderated). This *is* Nigeria's affordable housing sector; not politically or judicially recognized, but not going away any time soon either.

One way forward would be the current practice of informal land subdivision as a whole within the formal framework of metropolitan land management but with powers devolved to local government. Devolution of power is implied in the present legislation but not implemented in practice. Rather things have gone in the opposite direction. (Nigeria, Cameroon[224])

Creation of a localized land-subdivision authority or responsibility within municipal governments will necessarily require devolution of authority from higher levels. In Nigeria, local governments used to produce such layouts in the past, but it was consolidated into State Urban Development Authority, which currently has a monopoly on formal layouts. (Nigeria) This faces a challenge in that here has been huge deterioration of local government and the professional work is now very substandard. What is required is a rudimentary upgrade of standards for the chieftaincy process and more transparent relation to normal local and state government processes.

Such quasi-judicial land subdivision can also be possible in countries that have a tribal or religious overlay. For instance, in Nigerian states with a largely Muslim population, such as the city of Rigasa (150,000 population) in the extreme west of Kaduna (Igabi LGA), the Emir's representatives[225] adjudicate such matters, subdividing and allocating the land with the help of moonlighting professionals from government. Money and hierarchy have a place in this system, halfway between a feudal system and a modern land market. (Nigeria)

In Ethiopia, local officials play a dual role for the local authority and for the households; this role could be both formalized and extended to land subdivision and site-infrastructure-reservation authority. (Ethiopia.) A similar pattern is visible in Ghana, where local authority professionals survey the land for the chiefs who allocate it, in a manner that was also observed in Malawi and Zambia.

B.1.4. Supply-side value chains: Design

Policy recommendation: Incentivize and fund (i) technological innovation in cementitious materials and other more sustainable building products, and (ii) pilot partnerships between pro-poor building materials companies (such as global cement companies), government and NGOs, to create hybrid value chains that deliver sustainable and technologically supported low-cost, low-skill, local-material building products for use in auto-promotion and self-built home improvement.

In this context, 'design' means both home layout and also identifying suitable low-cost, low-tech building materials that are both climatologically practical and culturally acceptable.

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[224] Similar experience with decentralization/devolution in Cameroon (see for example Mbuagbo, Oben Timothy. "Cameroon: Flawed Decentralization & the Politics of Identity in the Urban Space." *Global Journal of Human Social Science Sociology, Economics & Political Science* 12, no. 11 (2012): 15-25.)

[225] Emirs' representatives are often district heads paid for by local government, a curious example of practical intra-legitimacy network connections.

While the informal housing is not subjected to building codes or construction-safety requirements, the sector is so large that at its upper end the housing built is physically robust and its formalization may be more a matter of judicial acknowledgment than structural upgrading. This could be accomplished with a review of building code standards and requirements, leading to a streamlined slum-upgrading building code suitable for smaller-density structures (e.g., walkups no taller than ten meters). In Cameroon, the Ministry of Urban Development and Housing (MINHDU) needs to lobby for and source funding for this purpose, if not from central Government then from funders such as the World Bank and African Development Bank (AfDB). (Cameroon). In some countries, e.g., Lesotho, there is virtually no housing made of recycled metal or plastic in the informal sector.

Such an approach could be coupled with pilot schemes to use greener and more sustainable cementitious materials, as referenced in Section Appendix 6.E.4 below.

B.1.5. Supply-side value chains: Risk assumption (and development finance)

Policy recommendation: Facilitate judicial and financial innovation via the development of pre-purchase land options or other forms of 'site control' that enable developers to plan property development without having to buy the property until construction is ready to commence.

The high cost of land – and the necessity to buy it before development, because pre-acquisition site control mechanisms are unreliable – excludes any entities that are not already fully formal and well-capitalized from land and property development. This is a particular form of the adverse-selection against residential development generally, and affordable housing specifically.

The cash constraints of land development could be alleviated by the promotion of non-cash contractual forms giving the developer (including homeowners or small-scale improvers) site control short of direct ownership. Forms include options, land contracts, land leases (with rising land payments after completion or offtake), or development joint ventures. Some of these require a level of sophistication that will not be possessed by informal-neighborhood residents. But if these residents formed into savings cooperatives or traditional savings groups such as Ethiopia's *iddirs*, neighborhood groups, or even facilitated by a religious institution (e.g. church or mosque), that aggregated entity could be a counterparty to a development agreement with a for-profit formal-sector entity, with the residents pooling their informal land rights in exchange for rights to residency or below-market purchase of a home in a completed (re)development. Models similar to this have been used successfully in Thailand (via the Asian Coalition for Housing Rights and its role as implementing agent of Thailand's Baan Makong program).

B.1.6. Supply-side value chains: Construction

Policy recommendation: Support development of a more flexible building code that grants exemptions from building requirements for small and lower-density properties (e.g. retrofitting an informal home into potential formality).

Just as design regulations tend unconsciously to favor formal development at the expense of home improvement and upgrading, so, too, do well-intentioned building codes or minimum property or construction standards. Yet, in the informal sector, small-scale contractors and artisans play a large role

in overall delivery of housing, home improvements, home upgrading/expansion, and the emergence of multi-household housing. Despite this, they are generally excluded from consideration in government programs, which tend to aim at large formal developers (reinforcing the upper-middle-income bias in production). Initiatives should be developed to engage them effectively into housing development. Capacity building of informal sector, small-scale contractors and builders, through technical and financial support, should be prioritized, together with sensitization on planning and building standards and quality control. (Cameroon)

Similarly, locally-developed building materials and technologies can be improved rather than rejected, and the building codes and contracting regulations should encourage rather than discourage this innovation. The reason is this: each of these cities has a significant housing deficit and the alternative is not a standard house but a wholly informal house, or even an affirmatively dangerous and exploitative dwelling, or sleeping on the streets.[1] Hence a professionally-built affordable property using locally-sourced and crafted material will displace not the formal house envisioned by the rule-writers but the overcrowded and unserviced house that the informal neighborhood will build on its own. (Ethiopia)

B.1.7. Supply-side value chains: Offtake (including mortgageability)

Policy recommendation: ***Incubate and fund capacity-building for 'group owners' (e.g., co-operatives) that are formal entities whose members or beneficiaries are or may be wholly informal, so that these entities can be bulk buyers (and even collective owners) of higher-density multi-family properties.***

In the main, the problem of assuring that a developer secures offtake (i.e. sales price for completed homes) does not arise in the informal supply of housing, because these owner-developers seldom if ever sell; instead they benefit from use value, realize rental income (again, often informal) from the other families or individuals who rent rooms or shacks on the homestead compound or plot.

Even so, offtake-related innovations are possible, though they take administrative effort. One such reform would be to formalize rules under which a low-income neighborhood or savings co-operative could become titular owner of a multi-home compound, structure, or set of plots, with individual rights that are worked out among the owners. Both legal forms of condominium (sectional title) and co-operative (entity as owner of record and renter to shareholder members) have been used widely around the world for precisely this type of problem, and in many countries, co-operatives, in particular, are seen as a permissible and legitimate form of ownership, and hence a source of offtake guarantees for developers seeking to recoup their capital and deploy it into the next development. (Cameroon, Ethiopia)

Authorization of condominiums and co-operatives should go hand-in-hand with demand-side innovation. Government should prioritize upgrading of informal settlements by channeling housing production subsidies to slum upgrading and housing improvement in existing informal settlements, rather than all into government-led formal social housing programs that produce many fewer units, that in turn prove economically out of reach of the vast majority of the target population. (Cameroon, Ethiopia)

B.1.8. Supply-side value chains: Subdivision management

Policy recommendation: Explore hybrid value chains that solve the 'last kilometer delivery' problem by connecting formal utility providers to intra-informal-neighborhood networks or delivery agents (e.g. water sellers, night soil collectors, community toilets).

No examples of community-managed multi-site properties emerged in the course of our study. Intriguing parallels arose, however, in both Thailand (Baan Maakong) and India[226] (Ahmedabad with the Parivartan municipal upgrading program in concert with the local utility).

B.2. Demand side: capital to buy, improve, formalize, or build informal homes

In the studied countries specifically, and among Sub-Saharan Africa more broadly, roughly 75 percent of urban dwellers are housed in informal settlements. None of them can afford even a subsidized, low-cost formal 'affordable' home under the applicable government program even if sufficient homes were being produced (which they are not). Hence the government should prioritize upgrading of informal settlements and creating a path to formalization. Finance is an important catalyst for this, and demand-side housing subsidies should facilitate slum upgrading and housing improvement in existing informal settlements rather than channelling them all to Government social housing programmes. (Cameroon)

Because mortgages are unsuitable for most households, countries should institute financing mechanisms that are compatible with informal households, especially the hybrids (formal income, informal tenure (FI); and informal income, formal tenure (IF)). (Ethiopia)

The predominant vehicle by which informal housing can be financed will be through the globally emergent phenomenon of housing microfinance (HMF) and which has recently received significant attention both within the Bank[227] and globally. Such schemes must be fostered throughout the demand-side value chain, including:

- The incubation and support of non-bank housing finance companies (HFCs) or microfinance institutions (MFIs) that are venturing into HMF and HALF.
- Encouragement and technical assistance for the creation and delivery of HMF and HALF-related financial products.
- Liquidity or other capital-raising mechanisms for MFIs and HFCs, possibly in conjunction with savings co-operatives, *tontines*, and other forms of credit-union or community asset-pooling schemes.
- Incubation and development of HMF schemes, products, and delivery entities that are community-driven (e.g. community service organizations (CSOs), community-based organizations (CBOs), and savings cooperatives) rather than being imposed from without by

[226] Unrelated but relevant: India's lunch-delivery dabba-wallahs represent a spectacular example of an entirely informal low-skill, low-cost, high-touch, high-quality network of agents who deliver individually cooked meals every day to Indian workers.

[227] See, for instance, a plenary-session presentation from the World Bank's Fifth Global Housing Finance Summit (June 2012), *Affordable Housing at the Base of the Pyramid: Formalizing the Informal, and HALF* http://siteresources.worldbank.org/FINANCIALSECTOR/Resources/GHFC_2021_David_Smith.pdf

global civil-society entities or NGOs[228]. Indigenous and traditional community structures have the legitimacy and 'bankability' which imposed structures would lack (Nigeria) as do SDI affiliates.

- Country governments should continue to liberalize and reform the microfinance sector to play a more significant role in housing finance. Housing microfinance is an important extension of the microfinance concept, and a potential resource for increasing the rate, scale and quality of housing supply. (Cameroon)
- Lending protocols based on a locally understood model, e.g., the Kuyasa Fund in South Africa based on the furniture hire-purchase model, has been very successful and trusted.[229]

B.2.1. Demand-side value chains: Eligibility

Policy recommendation: ***Develop an effective typology of informal assets (such as that used in Home Asset Loan Finance) and a similar definition of a Qualified Informal HMF Borrower, which can be used across multiple countries in Sub-Saharan Africa.***

In this context, eligibility refers not to formal statutory or regulatory criteria, but rather to explicit or implicit biases or standards normally embedded in financing products or in demand-side value chains and entities.

Initiatives to be supported, funded, or endorsed by the Bank should be those that use a definition of Qualified Informal HMF Borrower incorporating inclusive informal-housing HMF principles (shown below).

[228] Shack/Slum Dwellers International (www.sdinet.org) is the conspicuous exception to this rule; the group has shown a capacity to incubate bottom-up pro-poor informal networks throughout Sub-Saharan Africa and has been internationally recognized (and supported) for this work.
[229] Mills, S. (2007). The Kuyasa fund: Housing Microcredit in South Africa. *Environment and Urbanization*, *19*(2), 457-469.

Qualified Informal HMF Borrower

A Qualified Informal HMF Borrower is a household meeting these criteria:

- Has a ***durable right of occupancy*** in an existing informal dwelling that could benefit from a One-Room Upgrade Loan (see definition).
- Is ***informally employed*** at the time of loan, preferably in an activity where an improved home environment (e.g. an in-home toilet) can be connected to likely increases in informal income
- Has an income, however informal, that on past performance (e.g. savings history or MFI repayment history) shows a business case for ***having effective demand*** for the One-Room Upgrade Loan.[230]
- May have access to extended-family resources (e.g. guarantors, remitting relatives either domestic or international) or intra-neighborhood resources (e.g. a savings co-operative) that can be plausibly included as repayment elements or default mitigants.

As noted, inherent in the Qualified Informal HMF Borrower definition is an expectation of a minimum-size One-Room Upgrade Loan.

One-Room Upgrade Loan

A "One-Room Upgrade Loan" is the smallest amount of money, within any particular country, that is sufficient for any of the following purposes:

- To add a structurally sound (floor slab, walls, roof, windows, door) rough-finished room onto an existing house.
- To finish the interior of a rough-finished room: non-dirt floor; walls surfaced with durable materials (e.g. ceramic tile); weatherization joins around apertures; connections for water cistern, toilet, and electrical appliances.

The One-Room Upgrade Loan is also presumed to come (a) from a non-depository, non-bank lending institution (such as an MFI or HFC) which has no access to inherent below-market capital (e.g. from low-interest community savings co-operatives), (b) with an interest rate commensurate with market principles (i.e. higher than mortgage collateral, lower than microfinance), and (c) over a loan term (tenor) that is no greater than the expected tenure life of the one-room upgrade for which it will be used.

[230] Demonstrated willingness to pay and ability to pay for a financing product of a size, loan term, and interest rate compatible with an HMF loan to build or improve one room in an informal urban house.

In Sub-Saharan Africa (and especially in the countries studied), a typical microfinance loan will be too little to meet the One-Room Upgrading test, and that in turn compels a longer loan tenor than in the microfinance business and risk-management model.

These definitions should be formally enabled by government, either through waivers of banking or MFI regulations for a portion of the HMF lender's portfolio, or by connection to approved pilot schemes (such as the GEMS 3 SLTR example in the Nigeria case report).

B.2.2. Demand-side value chains: Application

Policy recommendation: Recognize, study, document, and wherever possible replicate the promotora/ saathiben model of informally employed field operations staff and recruiters (usually women) as neighborhood-based HMF originators, application-facilitators, and subsequent loan servicers.

Application is the process of identifying potential borrowers for a loan product, educating them as to its benefits, and value-engineering the application. Successful MFIs and HMF lenders use individuals as a combination of recruiting agent, loan applications collector, property inspector, and loan servicer. These are typically people from the same community as the target customers – informally employed women.[231] These individual agents have consistently proven to have better 'touch' with the customers and their follow-up activities, while classified as loan servicing, are believed broadly to have proven successful at reducing the duration, severity, and loss of MFI defaults.

These people are as important to informal housing demand-side interventions as mortgage lenders and underwriters are to formal supply-side housing finance. In addition, they are more numerous and much more cost-effective to develop, educate, and professionalize. Actions logically implied by the evidence include expanding Community HMF Promoter capacity via:

- Low-cost education seminars on customer financial literacy/ lending training, followed by a written proficiency examination leading to a form of certification, preferably a standard endorsed by established microfinance institutions or trade associations of Non-Banking Financial Companies (NBFCs).
- Development of a code of ethics and fair dealing.
- Aggregation and pooling of experience on effective practices for community promoters, perhaps via member-based organizations that are providing establishment or incubation funding by governmental entities.

B.2.3. Demand-side value chains: Subsidy

Policy recommendation: Aside from reversing subsidies that act in a de facto exclusionary way (because they flow only to formal borrowers and not to informal ones), allow member-based and qualified non-bank co-operatives to use their deposits as a capital source for intra-cooperative-member lending.

[231] Cemex's *Patrimonio Hoy* program called them promotoras; SEWA's lending programs call them *saathibens*.

Generally speaking, no subsidies flow to informal-housing demand-side products, which are priced purely in the marketplace. (As a general rule, microfinance rates are higher than HMF rates, which, in turn, are higher than mortgage rates.) Because access to liquidity capital is a principal challenge for HMFs (as it is for MFIs), the rate charged on that capital is of paramount importance to the viability of HMF and the size of the Qualified Informal HMF Borrower population.

Subsidies could be 'embedded' into HMF products, if the HMF entities were able to tap deposits or community savings as their source of liquidity, because these community-based groups are more interested in capital protection and capital accumulation than they are in the notional interest rate of their funds. In this regard, *tontines* (essentially group savings co-operatives that also lend within their membership) represent massive financial and social capital. Ways should be found to tap aggregated capital of the *tontine* system without destroying its essential reliance on personal connections, rather than imposing incompatible formal-world credit policies based on documentary information. (Cameroon) This might also work in other locally-based savings schemes such as Ethiopia's *iddirs*.

In the same way, though HFCs are sometimes classified as real estate lenders and subjected to statutory anti-usury caps on lending, they should be exempted from such statutory caps and treated as akin to MFIs and other non-bank entities. At the same time, HMFs should be monitored so that profit-seeking and exploitation do not take over and thus undermine the pro-poor mission that MFIs and HMFs pursue.

B.2.4. Demand-side value chains: Credit underwriting

Policy recommendation: Support and widely promulgate the principles of housing microfinance and Home Asset Loan Financing (HALF).

Credit underwriting exhibits some of the most striking differences between informal and formal financing mechanisms – the process of determining whether a borrower is a prudent risk, as illustrated by the following table:

Table XX.

Formal lending	*Informal lending*
Relies on documentary evidence (e.g. pay slip, credit score)	Relies on personal evidence (e.g. inspection of the home, reports of neighbors).
Verification of employment	Verification of incumbency and duration
Applicant is often entirely unknown to the lender	Applicant is personally known to lender
Information is electronically captured	Information is captured verbally and on paper

Both models can work, but they imply vastly different scales of the banking/lending enterprise, and it is difficult to transition an organization's business processes and systems from one to another.

The difficulty of adapting not just the financial product but also the credit underwriting model, organization, and people processes, has proven in several countries (e.g. Nigeria) to be a significant obstacle to the expansion of HMF. This is a natural area for policy intervention led by the World Bank and similar institutions; indeed, a portion of the recent $300 million loan from the World Bank to the

Government of Nigeria is earmarked specifically for jump-starting and piloting HMF, with development of underwriting business models/ people/ systems a significant priority within that effort.

Furthermore, difficulty in securing valid collateral assignments of land, though a supply-side blockage, naturally cripples the demand side.

Therefore, pledging of non-foreclosable collateral (e.g. divided land-use rights, or informally acknowledged land-use rights) should be part of the credit decision and underwriting. There is more than enough structure and legitimacy involved in community-level land transactions to enable them to benefit from housing micro-finance programs, where loans are not covered by title documents. Local chief-moderated transactions may lack detailed records, but they are often undertaken in the open and with many witnesses, and should be able to support HMF. (Nigeria)

B.2.5. Demand-side value chains: Loan closing

Policy recommendation: As much as possible, encourage standardization of HMF loan products through regulatory safe harbors such as defining a 'qualifying informal loan' (e.g., for depositary or regulatory exemptions) that can be counted as capital for NBFC and MFI regulatory capital requirements that exempt such NBFCs and MFIs from usury-law limitations.

This step would benefit greatly from standardization of loan documents across multiple HMF lenders, though this is not happening in any of the studied countries. Standardization could be facilitated by provision of technical assistance, provided by the MFIs' regulator in each country, to survey existing MFI entities and their activity in HMF, and then to extract typological documents with a view to creating an 'open source franchise kit' of standardized documents available free of charge to MFIs interested in entering the space. Such kit-based standard forms could also be administratively favored by the countries promulgating regulations whereby loans using standard documentation are stipulated to be, e.g., exempt from usury laws or accepted as valid for MFI capitalization and liquidity requirements.

B.2.6. Demand-side value chains: Funding and liquidity

Policy recommendation: Conduct a region-wide study of co-operative-based proto-credit unions such as tontines, iddirs, and stokvels, and assess whether these can be scaled into a proprietary and favorable funding sources for HMF lending.

Beyond the ordinary challenges of liquidity, Primary Mortgage Institutions (PMIs) dealing with informal housing face the further challenge that their loan portfolios are below-mortgageable collateral quality, hence will be harder to liquefy. Hence many of them face severe liquidity crunches and often seek to maintain liquidity solely through loan repayments, which results in shorter loan tenor, smaller loans, and in general inhibits the growth of HMF as distinct from microfinance.

An unusual solution has emerged in Cameroon. *Tontines*, as they are known locally, operate as non-bank informal savings co-operatives which then on-lend to their members in rotation. Analogs exist in other countries: *susu* in West Africa, *iddir* in Ethiopia and *stokvels* in South Africa. Such community-based lending dates back at least three hundred years. It is the progenitor of building societies, savings and loans, cooperative banks, and Germany's *bausparkassen* system.

To move from these home-grown and small-scale, unreliably capitalized, and fluctuating ROSCAs or SACCOs would require significant capacity-building investment.

Although statistics are hard to obtain, the research indicates that there is massive financial and social capital in the *tontine* system. Ways should be found to use and grow that capital base, without totally destroying its essential basis in community. As discussed below, mobile banking is a largely untapped resource for informal and tontine-based lending. (Cameroon)

B.2.7. Demand-side value chains: Loan servicing

Policy recommendation: Connect MFIs and HMFCs to mobile-banking and mobile-telephone companies, and support the funding of open-source software applications that enable people to pay HMF loans via mobile phone or by redirection of mobile-phone-currencies and surrogates.

In informal lending, the loan servicer comes to the customer, and collection is usually done in person, in cash, with the borrower receiving a handwritten receipt at the time of cash handover. This is then followed later by an electronic accounting when the community promoter returns to the main office and deposits the funds.

The result is a challenge, known as the 'last-kilometer problem': How does the lending institution – even one with a branch located within walking distance of an informal neighborhood – arrange reliable collection?

Loan servicing in informal settlements can be particularly difficult because they are densely inhabited with tight social networks that are often suspicious of outsiders. Therefore, in order to be effective, the collection mechanisms must be locally accepted. It is apparent in the studied countries and throughout sub-Saharan Africa that loan servicing is personal. Thus, there is a natural relationship with the loan origination/application process referenced above.

Similarly, the use of mobile telephony and mobile banking, which has exploded in the formal sector of Sub-Saharan Africa and many other countries around the world, has yet to be adapted for the informal sector, even though everything about mobile banking is compatible with a low-cost high-touch customer execution. Capacity-building or research and development to explore partnerships between mobile telephone companies, *tontines* or their local equivalents, and MFIs/ HFCs could yield very fruitful new hybrid value chains and business models.

B.2.8. Demand-side value chains: Enforcement

Policy recommendation: Develop positive-deviance examples of enforcement mechanisms that use non-mortgageable collateral or deprivation of home occupancy use instead of foreclosure and resale of the real estate collateral.

In the formal sector, enforcement consists mainly of default, foreclosure, seizure of adverse possession, and then resale of the collateral. This remedy is by definition unavailable in informal housing finance and in the formal sector where housing is not a marketable commodity, e.g., in Ghana.

Inability to foreclose and resell does not, however, mean that informal housing has no value as collateral – because housing, unlike other assets that may be pledged, is essential to the borrower; everyone uses it every day, and losing the asset means literally losing one's home, perhaps the most disruptive event possible for a family. Hence the lender's ability to disrupt occupancy is a meaningful deterrent to default, and conditional assignments of that occupancy right have proven to be meaningful risk mitigation.[232]

Globally, HMF providers are using various forms of non-foreclosure collateral assignment – attachment of personal property (e.g. gold), pledge of a 'right to occupy' certificate. However, none of this was observed in the three studied countries and none of their governments has at yet shown interest in liberalizing laws or regulations to make occupancy-rights more relevant as HMF collateral.

[232] The Kuyasa Fund purposefully does not reclaim the home but instead uses the bailiffs to repossess furniture, television, and other personal possessions to avoid homelessness but make the point about the importance of paying one's debts.

C. The formal housing delivery system and its value chains:

C.1. Supply side: Creating better and more affordable homes

All of the surveyed countries show substantial housing deficits, even among formally employed people with income sufficient to represent effective demand. Much of this is due to cost increases related to the disrupted nature of supply-side value chains.

More broadly, to the extent that the studied countries' governments have been interested in stimulating supply, they have done so in response to upper-middle-income and professional workers (including government workers). While this is better than no stimulus whatsoever, it results in governments believing that they "have done everything they can" for housing affordability, when in fact their initiatives reach only a tiny fraction of the effective demand.

Therefore, governments should focus their collaborative efforts with foreign partners away from the current social housing programs, which are affordable only to those in the highest income brackets, to affordable housing projects for the lower income groups. (Cameroon)

C.1.1. Supply-side value chains: Land.

Policy recommendation: Streamline land entitlement procedures and land transfer procedures; and recognize that cadastral upgrades that work well in a rural (one-story) environment) must be retooled for the urban (multi-story) environment.

The challenges facing the land market system in Sub-Saharan Africa are without question numerous, interdependent, and entrenched. And where a country's land markets do not function effectively, then its housing markets cannot function.

Across much of SSA (with the exception of Ethiopia), land and direct land-related costs (e.g. title, registration) represent 30-50 percent of the total development cost of structures. Such high land costs not only represent a challenge to affordability but also act as a barrier to small-scale land development or home upgrading, because the holding costs of acquiring land are high and are out of reach of smaller-scale builders/ developers.

At the same time, pressures of urban growth force land into higher-density usage. If the formal land markets are failing to respond quickly enough, informal land markets will take their place.

That is happening throughout the studied countries and in Sub-Saharan Africa more broadly; disablement of normal land-market function (for judicial, political, economic-heritage, or other reasons) is the norm and the thicket of disabling laws, regulations, and practices is difficult to penetrate.

For instance, under current Nigerian law, the State Governor must personally sign land transfers. The delay and costs involved are an open invitation to try other routes to housing provision. Moreover, difficulty in securing valid collateral assignments of land, though a supply-side blockage, naturally cripples the demand side as well. Nevertheless, changing the present system is proving a huge challenge for Nigeria's legislators. (Nigeria)

C.1.2. Supply-side value chains: Trunk infrastructure

Policy recommendation: Encourage and support expansion-planning grid or arterial layouts of rapidly growing cities so that the framework of informal settlement and private informal investment allows space for later retrofitting of physical infrastructure grids.

It is apparent that in the countries studied, and throughout Sub-Saharan Africa, the scale of cities is consistently greater than the infrastructure grid designed for those cities. Therefore, the rate of urban expansion (measured in hectares under urban use) is outstripping the rate of infrastructure-grid expansion.

For this purpose, infrastructure may be divided into four categories:

- *Land reservation*. Laying out an expanded grid or network system so that areas for, e.g., roads or railways or permanently public space will be reserved for the later introduction of physical infrastructure.
- *Judicial/legal, especially zoning*. As the city expands rapidly, land that was agricultural moves into development use, which may represent a change in use contravening the land's historical zoning. None of the nations studied have any form of rezoning or homestead-recognition acknowledgment that would enable these peri-urban areas to become formalized. Further, some of these large tracts are encumbered with agricultural leases, tribal/ ethnic group-ownership claims, or other legacy agreements that have some enduring legal validity but are unquestionably contrary to the land's current and future uses, with no means of rationalizing the encumbrances to reflect the reality.
- *Political*. When municipalities are independently governed, the question arises whether to incorporate the outlying areas into the voting base (by annexation or incorporation of the non-city area), and hence to create new voting blocs or to leave these places either unincorporated or incorporated into adversely-selected 'poor only' towns.[233]
- *Physical*. Actual roads, railways, pipes, wires, and all the accoutrements and junction points of such networks.

In each of these four components of infrastructure, Sub-Saharan African cities' growth is faster than the growth of applicable infrastructure, but curiously, cities tend to focus exclusively on the fourth element – physical infrastructure – overlooking that they could take dramatic steps earlier on the other three elements, and create the 'arterial city of dirt roads' that has proven to be a better blueprint for a formalizing informal and expanding city.

In other countries, though not in Sub-Saharan Africa, large developers will sometimes arrange with municipalities that the developer will provide the trunk infrastructure in exchange for VAT or tax concessions. This has proven effective as a means of expanding the infrastructure grid into peri-urban areas, though of course it is self-selected for the better neighborhoods, not the poorer ones.

[233] Though South Africa is outside Sub-Saharan Africa as defined in this report, South Africa's history of apartheid black townships and Bantustans demonstrates in the most stark and compelling way the folly of 'growing around' unincorporated pockets of poverty that are denied inclusion in the formal and expanding metropolitan city.

Governments could target infrastructure upgrading by providing implicit or explicit subsidies (e.g. VAT waivers) for developers that add infrastructure for residential development, with particular emphasis on recovering cost so that the project is economically sustainable, and can maintain and extend their systems. (Ethiopia)

C.1.3. Supply-side value chains: Site Layout (including subdivision)

Policy recommendation: Authorize quasi-judicial and traditional means of subdividing land plots for multi-household use.

Closely connected to the challenge of trunk infrastructure is that of site layout. To begin with, established zoning or setback requirements, codified into law or regulation during a pre-urbanized or even pre-independence (i.e. colonial) period, tend to presume that land is widely available (and that trunk infrastructure is relatively unimportant). The result is a zoning or plot standard that is wholly unworkable for multi-household use in increasingly dense urban settings.

In Cameroon, minimum plot size in urban areas is either 200 m^2 (SAD) or even 300 m^2 (a recent decision by MINHDU expanded it, which is reform in precisely the wrong direction). Plot size and dimension also have significant implications for provision of trunk infrastructure (water supply, sewerage, roads and electricity), and hence the affordability of serviced land for housing development. (Cameroon)

Similar dynamics are at work in Ethiopia, which has very small minimum plots compared with the rest of Sub-Saharan Africa, but should still review plot sizes with a view to reducing them/easing the planning procedure for splitting very large plots. (Ethiopia)

C.1.4. Supply-side value chains: Design

Policy recommendation: Reform antiquated building codes and structural requirements that were enacted before modern sustainable building materials were invented, and that now may protect local building-materials monopolies.

Far too little effort is going into improved and lower-cost building materials as a means of reducing floor plans, home prices, energy consumption, and carbon emissions.

Throughout Sub-Saharan Africa, the dominant building material is cement, though the quality and cost vary widely (including in Nigeria, where for country-specific reasons it is at least double the expected average cost). Advances in cementitious materials, including those led by the world's major cement companies (Holcim, Lafarge, and Cemex to name three) create the possibility of lower-cost, greener (carbon-absorbing), higher R-factor forms of cement that could (with the right establishing infrastructure) be manufactured using locally sourced materials and local, lower-cost labor. Partnerships between large cement manufacturers, local savings groups or community groups, and government-facilitated land subdivision and informal upgrading programs offer the prospect of creating a hybrid value chain.[234]

[234] As coined by Ashoka. See *Harvard Business Review, A New Alliance for Global Change,* http://hbr.org/2010/09/a-new-alliance-for-global-change/ar/1

In Cameroon, the establishment of the Local Materials Promotion Authority (MIPROMALO) in 1990, at the height of the economic crisis, to promote the use of locally manufactured materials in order to reduce the cost of housing, was an important addition to the institutional framework.

The formulation of the new design norms and standards for housing should be performance-based rather than material-specific to allow use of a wider variety of materials.

The use of local building materials, in particular those being promoted by MIPROMALO, should be encouraged through subsidization and/or tax incentives. Governments should facilitate their appropriate and effective use in their social housing programme.

C.1.5. Supply-side value chains: Risk assumption (and development finance)

Policy recommendation: ***Create domestic national-level and state-level development-finance products and lending as a recognized commercial banking activity, which are in many ways more important than even liquidity facilities.***

Countries that have a shortage of mortgage finance (for end-user homeowners) likewise have no practical source of development finance (e.g. the classical developed-nation construction loan or its predecessor, the land-acquisition loan).

Hence the presence, in countries such as Nigeria, of banks acting as *de facto* co-developers because they will (i) accept off-plan sale deposits (see Step 7 discussion below) and then (ii) allow developers to use those off-plan-sale deposits as cash for the property's development, with no escrow or other form of consumer protection. Elsewhere, without loan finance, prospective owners must pay 100 percent up front before occupation (Ethiopia, Ghana, etc.).

C.1.6. Supply-side value chains: Construction

Policy recommendation: Endorse consumer-protection laws regarding off-plan sales.

Construction is a capital-intensive and high-risk endeavor. As seen in the studied countries specifically, as well as throughout the region generally, these factors make residential construction difficult for smaller firms to enter, leading in general to an oligopoly of a few large firms that dominate the formal market, not necessarily to the consumers' benefit.

Accordingly, all these countries would benefit from initiatives to expand the number of small and mid-sized contractors, with streamlined or fast-track expansions such as:

- Reducing permit delays or offering accelerated home-improvement permits meeting certain limited conditions.
- Developing credit mechanisms for small construction firms.
- Directing industrial promotion benefits to small entrepreneurs in construction.
- Improving training in construction skills. (Ethiopia)

In addition, the 'natural oligopoly' arises because banks, the principal purveyors of development finance, naturally lend to their best credit risks, and as residential construction is adversely selected by developers, it is likewise adversely selected in bank underwriting. In short, the banks want higher equity ratios and stronger builder/contractor balance sheets. Banks also are wary of the offtake risks (see next subsection) as residential development requires sales of many individual homes to individual buyers, whereas development of a commercial use (e.g., an office building or shopping complex) will normally have a single-buyer offtake (such as a pension fund or insurance company).

Countries that are serious about stimulating housing development must find ways to counterbalance the banks' natural conservatism. In some countries, though none of those studied in this report, government motivates 'down-market' in various ways: directly as in Cameroon, via capital injection,[235] or indirectly, with South Africa's Financial Sector Charter and India's Priority Sector Lending, being the two most relevant examples.

C.1.7. Supply-side value chains: Offtake (including mortgageability)

Policy recommendation: Encourage employer-assisted housing through employer-based provident funds, deduction-at-source payment methods, and means whereby corporations are incentivized to intermediate both (a) potential informality or defects in the formality of title/ zoning/ building code or (b) some of their employees' default risk so as to lower their employees' cost of mortgage finance.

As noted on the demand-side discussion, the small size of the formal mortgage markets inhibits offtake of newly built homes, and while that is a demand-side failure, it also impacts the supply side, because developers have difficulty securing construction financing (see C.1.6 above). When the buyer's execution (that is, completion of home purchase) is unreliable, and the buyers are many individuals, both developers and lenders regard their capital recovery as less certain, hence they want a premium to pursue the business.

Some nations have used large formal employers, either public sector (e.g. police, hospital workers, the military) or private sector (e.g. banks, natural resource companies, utilities) as an intermediate buyer or aggregator of buyers, via employer-assisted housing schemes or provident funds (which are an employer-managed payroll-deduction savings scheme that acts much like a credit union, or even an employer-based *tontine*).

Though sensible, these innovations were not observed in the three studied Sub-Saharan African countries, and indeed throughout the region, mechanisms to aggregate potential buyers into an effective unitary counterparty for a developer are largely absent.

In Ethiopia, the presence of so many large Chinese natural-resource and manufacturing companies offers a unique opportunity to create employer-assisted housing schemes, even whole 'company town' villages, where housing provision enhances workforce morale, reduces turnover, pilferage, and wastage, and provides a positive benefit to the community that can counterbalance the negative perception of "foreigners taking wealth out of our land." (Ethiopia)

[235] In Cameroon, the Government has committed to inject capital into the state-backed lender CFC (Credit Foncier du Cameroun/ Cameroon Housing Loan Bank) to enable the middle-income brackets to access funding to either build homes incrementally or take out mortgages.

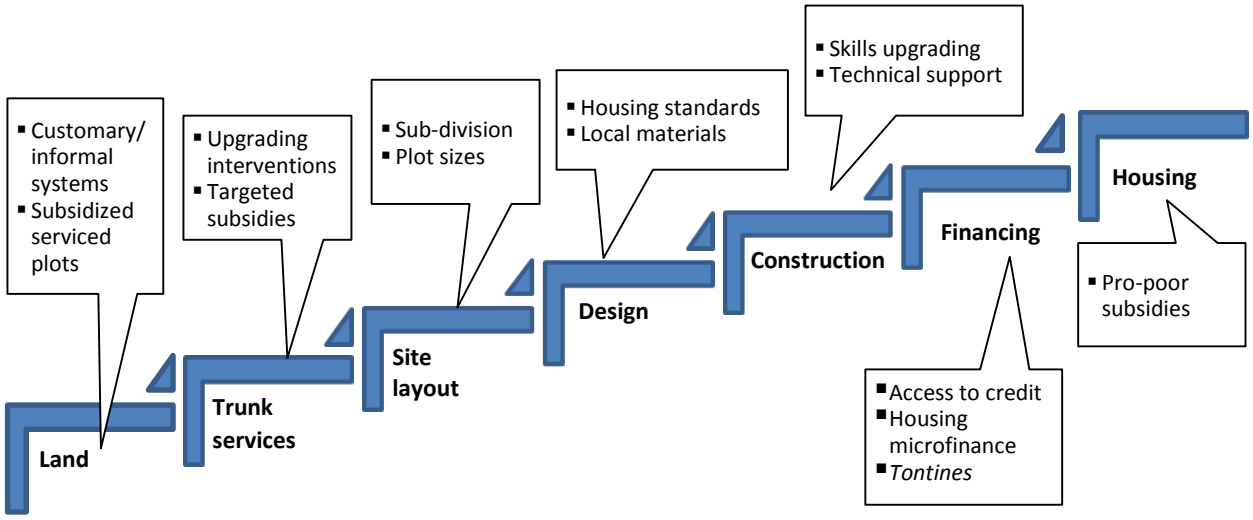
C.1.8. Supply-side value chains: Subdivision management

Policy recommendation: Support the import of developed-nation expertise in multi-family property management and homeowners' associations (HOAs) for adaptation to local contexts.

Property management and facilities management are in their infancy in Sub-Saharan Africa.

For a rich person in a poorer country or neighborhood, a home is not simply a place to sleep and be with one's family, it is also where personal valuables are stored, and that makes the home a target for break-ins and worse (home invasions). As a result, when professional formal housing is developed in Sub-Saharan Africa, it is priced for and sold to the upper-middle class (that is, the nation's emerging economic elite). The subdivisions that are developed often include security: high walls, metal automobile gates, and uniformed guards (often armed).

In developed economies, security is an adjunct to property management or estate management, but in Sub-Saharan Africa it is often the anchor service. Further, it leads homeowners' association to develop rubbish collection, site infrastructure upkeep and maintenance, and other condo-association related activities.



C.2. Demand side: Capital to buy, improve, formalize, or build informal homes

All of the surveyed countries show only small levels of mortgage penetration, and as a result there is significant effective demand that is not being met. As noted in the previous section, much of this can be traced to the high cost of formal housing (a consequence of land scarcity and disrupted supply-side value chains), but some can also be traced to the newness of mortgage finance and its slow uptake.

In general, natural caution among for-profit lenders (including Primary Mortgage Institutions concerned about maintaining liquidity) results in a system that is *de facto* exclusionary even though its participants are not intentionally seeking to exclude.

C.2.1. Demand-side value chains: Eligibility

Policy recommendation: Strengthen credit bureaus and require fair-credit-reporting transparency of credit information.

As previously noted, eligibility refers not to formal statutory or regulatory criteria, but rather to explicit or implicit biases or standards normally embedded in financing products or lending systems. Within Sub-Saharan Africa generally, and the studied countries specifically, there is a shortage of financial access for middle-income and lower-income households (about 80-90 percent of the population). That creates lending-based problems as the unbanked or under-banked will not build up electronic or other scaleably documented credit histories, credit scores or their equivalent, or other documentary past-performance indicators of credit-worthiness, and may be selected against not because they cannot pay or will not pay, but because the formal lender, used to counting only what can be documentarily observed, is not ready enough to *believe* that they can and will pay.

C.2.2. Demand-side value chains: Application

Policy recommendation: Build origination capacity in PMIs and support the use of web-based, open-source, pre-underwriting and credit-scoring software applications.

In the realm of formal finance, origination and application are handled by Primary Mortgage Institutions (PMIs) that have branches in central business districts and employment centers. Application centers on the formally employed and tends to be automated and connected to a network, with credit underwriting done off-site (at the main PMI office).

C.2.3. Demand-side value chains: Subsidy

Policy recommendation: Identify and make visible 'hidden' subsidies and require any such subsidies to have effective targeting so that they are not captured by the middle class or subject to 'upward drift' (where the subsidy is theoretically open to all but in practice awarded only to the upper-middle class because others do not qualify on credit grounds).

The shortage of credit information also contributes to an under-appreciation of the potential market expansion, and hence a lack of market evidence that lower-cost homes can be successfully financed by mortgage lenders. This is a natural area for government incentive programs, as the presence of a government guarantee or partial guarantee would go a long way toward expanding the reach of mortgage products to the middle-income population, and hence to creating a source of reliable bulk offtake for developers.

None of the studied countries provides direct interest-rate or financing subsidies to targeted household types, and indeed such subsidies are extremely rare throughout Sub-Saharan Africa. Instead, a more common approach of 'hidden' subsidy arises when a government entity either offers concessionary

terms (e.g. longer loan tenor, higher loan-to-value ratios) or an implicitly subsidized rate (spreads lower than commercially reasonable in the marketplace).

C.2.4. Demand-side value chains: Credit underwriting

Policy recommendation: Build credit bureau capacity.

Credit underwriting in the formal housing finance sector (i.e. mortgages) follows standard banking protocols and principles. Because mortgage volume is small and properties are expensive, banks are under little competitive pressure to expand eligibility or offer less conservative standards.

Credit bureaus may exist (Cameroon[236]) but if so, are largely in their infancy.

C.2.5. Demand-side value chains: Loan closing

Policy recommendation: Professionalize the role of individual loan originator as distinct from banker or credit underwriter.

Loan closing is handled by PMIs according to standard procedures.

C.2.6. Demand-side value chains: Funding and liquidity

Policy recommendation: Continue to support, establish, capitalize and improve national-level secondary-market liquidity facilities, products, and entities.

Primary Mortgage Institutions (PMIs) that are not deposit-taking entities always face the ongoing challenge of liquidity. Their initial capital may be used to create a loan portfolio, but that loan portfolio is illiquid until and unless a secondary-market liquidity provider is created.

No such liquidity facility exists in Nigeria, for example, and its creation is the principal purpose of the recently approved US$300 million World Bank loan to Nigeria. Ethiopia addresses this by having government-run banks as the mortgage givers, guaranteed by the Ministry of Finance.

Deposit-taking institutions are generally regulated as banks, and as banks, are generally prohibited from engaging in loans with interest rates high enough to support HMF, or with non-mortgageable-collateral. Nor are banks interested in fostering bottom-up competition that might erode their healthy profit margins on mortgage lending.

Meanwhile, commercial-market liquidity providers are unwilling to accept loan portfolios of non-mortgageable collateral. So PMIs find themselves constantly thirsty for liquidity, and in Sub-Saharan Africa, the nations' housing finance sector does not provide it. This is a regional problem and a significant missing link in demand-side informal housing finance.

[236] This is indeed the case in Cameroon, which has a National Credit Council (CNC) which publishes information on loan defaulting. But see also "scoring for the getting credit indicators" in World Bank's "Doing Business Reports" (0-6)

In Nigeria, low capital requirements among low-end PMIs led to many of them opening a storefront office, taking in deposits or conducting a small amount of business, and then in effect going completely dormant, either through lack of liquidity or simply out of bad loan performance. The result was a glutted sector that put consumers at risk.

As a result, during 2012, the Central Bank of Nigeria required all PMIs to increase their capitalization dramatically or face closure, a strategy designed both to strengthen the more productive PMIs via recapitalization and also to shut down those that were undercapitalized or of dubious integrity and reliability. Substantial consolidation occurred. (Nigeria)

C.2.7. Supply-side value chains: Loan servicing

Policy recommendation: Aggressively support partnerships between domestic banks and mobile-telephone and mobile-banking companies.

Formal-financing loan servicing follows well-developed, standard banking protocols: customers have bank accounts, they are formally employed (and may benefit from electronic deposit), and the employer can (if necessary) be brought into the collection mechanism. None of these mechanisms are available in informal lending, leading to an issue, also observed in infrastructure provision, known as the 'last-kilometer problem'.

As referenced in the section on informal loan servicing, mobile telephony and mobile banking are the natural next frontier in Sub-Saharan African housing lending. It is striking that mobile telephony and mobile banking are being rapidly taken up in consumer finance (to start with, every mobile telephone company is in the financing business, as it sells customers the rights to use the mobile phone) and many nations have discovered that selectively providing generous credit influences what goods consumers purchase.

Capacity-building or research and development to explore partnerships between mobile telephone companies, *tontines*, and MFIs/HFCs could yield very fruitful new hybrid value chains and business models.

C.2.8. Demand-side value chains: Enforcement

Policy recommendation: Encourage government housing finance bodies to intermediate 'non-commercial' risk (e.g. unreliability of foreclosure) by creating performance-guarantee insurance whereby, e.g., failure by a locality to recognize a valid foreclosure notice allows the lender to sell the loan to the national housing finance entity at par.

Foreclosure rights are impaired compared with developed nations:

- Nigeria lacks a formal foreclosure law and lenders are wary that they can get tied up in years of civil litigation when they attempt it. 'Contractual arbitration' is being used as a work-around (http://www.lagoshoms.gov.ng/?u=arbitration).
- In Cameroon, as explained in the case study report, there is quite a high rate of loan defaulting; for instance, CFC is saddled with more than 10 billion FCFA (US$21 million) in bad loans.

One can speculate that defects in foreclosure effectiveness also inhibit commercial lending into residential real estate.

Appendix 6. Formality and Informality in Housing Finance

A useful way to understand how formality and informality impacts housing finance, in particular, is to consider housing situations across two dimensions:

- *Tenure*. Reflected by legal title, by legal document (e.g., haq), by contract (e.g., lease), by rental, by verbal paid (or unpaid) agreement, or by customary right. Many forms of housing are not formal because they are not legally registered, structurally sound, or inspected (e.g., with certificate of occupancy).
    - In some cases, property ownership and land ownership are misaligned (i.e., people own their structures but the land underneath is communally owned, or ambiguously owned).
- *Income*. Formal income is electronically visible, steady, and reliable. Informal income is cash-based and not paper documented, volatile, and prone to interruption.

All housing can be subdivided into four distinct cases:

FF: Formal income, formal tenure
FI: Formal income, informal tenure
IF: Informal income, formal tenure
II: Informal income, informal tenure

These are most conveniently displayed in a 2x2 grid:

Table 8~~Error! Main Document Only.~~. Typology of formality and informality

	Formal tenure	*Informal tenure*
Formal income	(FF) Developers Mortgages	(FI) Contractors Cash Employer NBFCs
Informal income	(IF) Contractors NBFCs Housing MFIs	(II) Self-improvers Cash Housing MFIs Tontines

FF housing encompasses the world of formality; the three other boxes (IF, FI, and II) represent the world of informality.

APPENDIX 7

Cross Cutting Solutions

Table XX. *Land, Planning and Regulations:*

Theme	***Issue***	***Recommendation***
9. Land	Land rights are often complicated, ambiguous, or contradictory, and formal land transfer procedures are at best cumbersome and at worst unachievable.	Encourage and support funding of pilots that allow for judicially accepted division of land rights that are short of formal land transfer evidenced by changes of title.
	In practice, land rights can be obtained either formally or informally. The latter is certainly cheaper and often 'more effective.	Support the legitimization of customary-rights grants that can transition into grants of formal rights via subsequent actions by the homeowner or municipality.
	Because land-development loans are rare, land must be acquired for cash, constraining the pace of development.	Streamline land entitlement procedures and land transfer procedures; and recognize that cadastral upgrades that work well in a rural (one-story) environment must be retooled for the urban (multi-story) environment.
10. Urban Planning and Policy	Many cities have outgrown their infrastructure grids and are growing fast, so infrastructure provision is scarce and lags behind development	Encourage and support planning and expansion of informal peri-urban areas by laying out the area with room to add public trunk infrastructure after the private infrastructure of informal housing and business has already sprung up.
	Emphasis on physical infrastructure (roads, pipes, wires) tends to distract municipalities from laying down intangible infrastructure such as an arterial system of dirt roads or easements/space reservations for later physical infrastructure.	Encourage and support expansion-planning grid or arterial layouts of rapidly growing cities so that the framework of informal settlement and private informal investment allows space for later retrofitting of physical infrastructure grids.
	The supply side of housing is a challenge because its value chain crosses multiple levels of government: national, state/ provincial, and local.	To prevent 'crowding out' by national government, support initiatives that devolve land-use authority to states or large metropolitan cities because they are closer to the challenges of urban growth in their area.

11. Site layout, regulations and standards	Procedures for land subdivision for development or density increase are cumbersome and slow.	Encourage authorization of informal but respected people and institutions (tribal, customary, or historically recognized) as quasi-judicial and judicially-compatible adjudicators of the subdivision of land for development compatible with rapid urban growth.
	Existing zoning and setback requirements artificially restrict parcel subdivision and densification.	Authorize quasi-judicial and traditional means of subdividing land plots for multi-household use.
	There is a need for replacing old building materials and technologies with greener or more sustainable materials (e.g. improvements in masonry products).	Reform antiquated building codes and structural requirements that were enacted before modern sustainable building materials were invented, and that now may protect local building-materials monopolies.

Targeting the Informal Housing Sector

Table XX. *Land, Planning and Regulations:*

Theme	***Issue***	***Recommendation***
1. Land	In most countries, high land costs make purchase or development by informal households financially difficult or impossible.	Facilitate judicial and financial innovation via the development of pre-purchase land options or other forms of 'site control' that enable developers to plan property development without having to buy the property until construction is ready to commence.
2. Regulations and standards	Application of formal building code requirements to informal housing or upgrading acts to exclude small-scale contractors and artisans from construction trades.	Support development of a 'building code light' that grants exemptions from building requirements for small and lower-density properties (e.g. retrofitting an informal home into potential formality).
	Prevalence of informal renting arrangements limit protections for tenants and landlords	Improve legal and regulatory framework to support petty landlordships and provide procedures and obligations for rental agreements and evictions. Develop basic standards for renting rooms or units and encourage renting unoccupied rooms and dwellings

3. Design and Materials	As self-built informal housing constitutes the main housing supply of SSA cities, many of these properties are physically substandard.	Incentivize and fund (i) technological innovation in cementitious materials and other more sustainable building products, and (ii) pilot partnerships between pro-poor buildings-materials companies (such as global cement companies) and governmental/ NGO institutions, to create hybrid value chains that deliver sustainable and technologically support low-cost low-skill local-material building products for use in auto-promotion and self-built home improvement.
4. Infrastructure	Informal neighborhoods are overwhelmingly under-serviced or unserviced by infrastructure and, instead, develop on their own, with wholly informal (and inadequate) forms of intra-informal-settlement infrastructure.	Fund the capital cost of infrastructure expansion into informal neighborhoods whose source of repayment is something other than net incremental rates to be paid by the slum dwellers, because these will seldom be sufficient to support the infrastructure establishment cost.

Table XX. Access to Finance

Theme	***Issue***	***Recommendation***
9. Eligibility and market research	Because housing microfinance requires a different borrower and collateral profile than classical microfinance, there is no clarity around what type of informal household will make a good HMF borrower.	Develop an effective typology of informal assets (such as that used in Home Asset Loan Finance) and a similar definition of a Qualified Informal HMF Borrower, which can be used across multiple countries in Sub-Saharan Africa. Further study the use of remittances for housing expenditures.
	Outreach to informal households depends upon networks of informally employed promoters who are generally unaware of or untrained in HMF.	Recognize, study, document, and wherever possible replicate the model of informally employed agents (usually women) as neighborhood-based HMF originators, application-facilitators, and subsequent loan servicers.
10. Subsidies for alternative lending institutions	Government subsidies for housing are generally targeted only to formally employed households.	Allow member-based and qualified non-bank co-operatives to use their deposits as a capital source for intra-cooperative-member lending. Study which housing affordability tools governments throughout SSA employ and evaluate their effectiveness.
11. Credit for Developing Housing Microfinance	Primary Mortgage Institutions (PMIs) face a constant liquidity drought and even a portfolio of performing HMF loans is not readily liquefiable.	Conduct a region-wide study of co-operative-based proto-credit unions such as *tontines*, *iddirs*, and *stokvels*, and assess whether these

		can be scaled into a proprietary and favorable funding sources for HMF lending.
12. Support for lending institutions	No principles or guidelines exist for how to treat informal property with use value but not resale value in the credit decision for HMF.	Support and widely promulgate the principles of housing microfinance and Home Asset Loan Financing (HALF).
	HMF loan documentation is not standardized or well-established.	As much as possible, encourage standardization of HMF loan products through regulatory safe harbors such as defining a 'qualifying informal loan' (e.g., for depositary or regulatory exemptions) that can be counted as capital for NBFC and MFI regulatory capital requirements that exempt such NBFCs and MFIs from usury-law limitations.
	Loan servicing requires the promoter to travel to the customer, rather than the customer going to the MFI or bank, making these networks hard to scale and standardize.	Connect MFIs and HMFCs to mobile-banking and mobile-telephone companies, and support the funding of open-source software applications that enable people to pay HMF loans via mobile phone or by redirection of mobile-phone-currencies and surrogates.
	Informal assets may be difficult to foreclose and even if foreclosed will have minimal resale value, so other forms of enforcement against collateral need to emerge.	Develop positive-deviance examples of enforcement mechanisms that use non-mortgageable collateral or deprivation of home occupancy use instead of foreclosure and resale of the real estate collateral.

Table XX. Expanding Credit Sources and Strengthening Ancillary Sectors

Theme	***Issue***	***Recommendation***
9. Expanding sources of development finance	Development finance (such as construction loans) is rare and results in homeowners' having to pay high percentages of eventual home purchase price to reserve an 'off-plan sale', which weakens demonstrable offtake capacity.	Create domestic national-level and state-level development-finance products and lending as a recognized commercial banking activity, in many ways more important than even liquidity facilities.
10. Expanding capital available to commercial lenders	Programs by employers (whether private company such as natural resource extraction or public entities such as government workers) to aggregate homebuyers are rare and not encouraged.	Encourage employer-assisted housing through employer-based provident funds, deduction-at-source payment methods, and means whereby corporations are incentivized to intermediate both (a) potential informality and defects in the formality of title/ zoning/ building code and (b) some of their

		employees' default risk so as to lower their employees' cost of mortgage finance.
11. Construction sector support	The cost of formal construction is high relative to household incomes and the result excludes smaller and mid-size contractors from scaling up.	Endorse consumer-protection laws regarding off-plan sales which can accelerate investment in land development.
12. Property management support	Homeowners associations (HOAs) are in their infancy and facilities management is limited to security.	Support the import of developed-nation expertise in multifamily property management and homeowners' associations (HOAs) for adaptation to local contexts.

Table XX. Supporting the Expansion of Formal Lenders

Theme	*Issue*	*Recommendation*
9. Support for lending institution operations	Mortgage and formal banking systems do not reach most of the population. Banks are also under little competitive pressure to improve their underwriting and expand the financeable population.	Strengthen credit bureaus and require fair-credit-reporting transparency of credit information.
	Primary Mortgage Institutions (PMIs) vary widely in capacity, honesty, and financial strength.	Build originational capacity in PMIs and support the use of web-based open-source pre-underwriting and credit-scoring software applications.
	Loan closing procedures depend on PMIs, whose capacity and consumer-protection vary widely.	Professionalize the role of individual loan originator as distinct from banker or credit underwriter.
	Technological innovation such as mobile banking has yet to reach residential loan servicing.	Aggressively support partnerships between domestic banks and mobile-telephone and mobile-banking companies.
	Limits in foreclosure acts or in foreclosure effectiveness discourage lenders from residential mortgage finance and thus also reduces incentives for developers to build housing.	Encourage government housing finance bodies to intermediate 'non-commercial' risk (e.g. unreliability of foreclosure) by creating performance-guarantee insurance whereby, e.g., failure by a locality to recognize a valid foreclosure notice allows the lender to sell the loan to the national housing finance entity at par.
10. Targeting of consumer subsidies	Subsidies are invisible (concessions and public infrastructure value-added embedded in land prices, land access, or financing availability) and reach the upper-middle income, not middle or lower-income households.	Identify and make visible 'hidden' subsidies and require any such subsidies to have effective targeting so that they are not captured by the middle class or subject to 'upward drift' (where the subsidy is theoretically open to all but in practice awarded only to the upper-middle class

		because others do not qualify on credit grounds).
11. Support access to secondary finance	Even successful PMIs face constant liquidity challenges because secondary market liquidity facilities are absent or small.	Continue to support, establish, capitalize and improve national-level secondary-market liquidity facilities, products, and entities.

[1] Tipple, Graham and Suzanne Speak (2009) *"The Hidden Millions: Homelessness in Developing Countries"* London: Routledge.