SHELTER AFRIQUE
Financing Affordable Housing for Africa

C A H F — Centre for Affordable Housing Finance in Africa

Housing Affordability Calculator Project

November 2021

Executive Summary & Project Steps

- How do we define "affordable"? This question remains central to the affordable housing sector.

- Poor affordability targeting limits determining the accurate and appropriate methods for indicating the determining the target price for units in an affordable housing project that is within the reach of the low income households and also at same time, feasible to the developers.

- This project aims to support Shelter Afrique to better address issues of housing affordability, in order to improve the targeting and viability of their affordable housing projects in Africa.

The objectives of this project are:

- To determine the most feasible, accurate and appropriate methods for determining the target price for units in an affordable housing project targeted at low-income households in Africa

- To determine the factors and approaches which enable affordable housing developers to produce units at this price

Project Steps

- Broad literature review

- Development of framework

- Consultation workshop with a group of global housing finance experts

- Two case studies undertaken in Kenya and Rwanda

- Online dashboard or calculator to calculate or determine housing affordability based on the demand and the supply sides

Common Methods Used in Affordability Calculation

❑ Ratio method

❑ Income Affordability
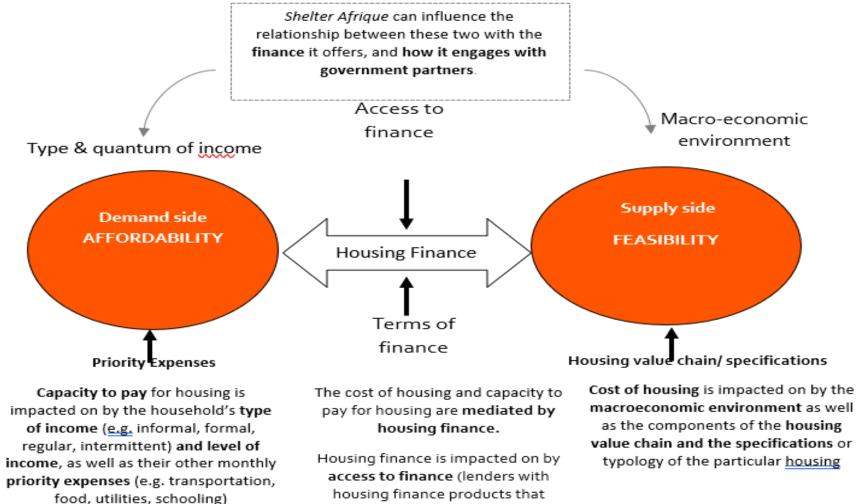
❑ Purchase Affordability

❑ Repayment Affordability

❑ Residual Method

The 30% rule of thumb method under the ratio approach is the prevailing method of assessing housing affordability. However, there is evidence of an increasing recognition of the weaknesses of the '30' percent approach to determining affordability when extended to a broad population with a variety of income levels and housing needs.

Furthermore, it does not account for spending on other essentials such as food and transport or the impact of urban context and location on housing affordability.

Framework for Understanding Housing Affordability

Shelter Afrique can influence the relationship between these two with the **finance** it offers, and **how it engages with government partners**.

Access to finance

Type & quantum of income

Macro-economic environment

Demand side AFFORDABILITY

Housing Finance

Supply side FEASIBILITY

Terms of finance

Priority Expenses

Housing value chain/ specifications

Capacity to pay for housing is impacted on by the household's **type of income** (e.g. informal, formal, regular, intermittent) **and level of income**, as well as their other monthly **priority expenses** (e.g. transportation, food, utilities, schooling)

The cost of housing and capacity to pay for housing are **mediated by housing finance**.

Housing finance is impacted on by **access to finance** (lenders with housing finance products that respond to households' type & quantum of income) and the **terms of that finance** (e.g. interest rate, loan tenor)

Cost of housing is impacted on by the **macroeconomic environment** as well as the components of the **housing value chain and the specifications** or typology of the particular housing

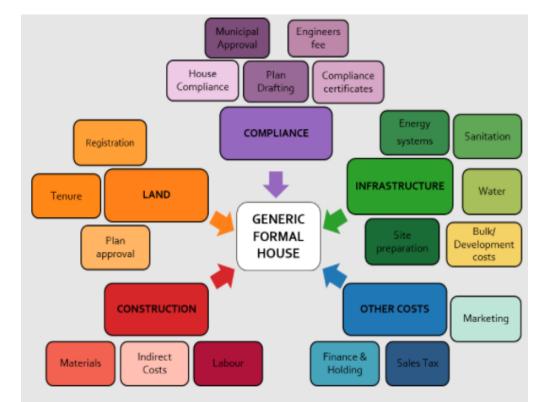# Demand & Supply Side Considerations

Demand Side Considerations

❑ Effective housing demand is a function of *ability* to pay (housing affordability) and *willingness* to pay (the value for money sense that comes with the appropriateness of the housing product to household needs – i.e., location, housing type, life circumstances).

❑ Households' ability to pay is also dependent on competing expenditure needs besides housing.

❑ Low-income households face other critical needs apart from housing.

❑ Competing household expenses include but are not limited to food, healthcare, transportation, childcare, recreational and educational expenses.

❑ The level of non-housing expenditure on these items is also influenced by the size and composition of households.

Supply Side Considerations

On the supply side, the developer must be able to produce a house at the target price while meeting its obligations to investors.

As shown in this **Figure**, the total cost of a house is impacted by various factors: infrastructure, construction, land and compliance costs.

Introduction to the Case Studies

The purpose of the two case studies is to assess **how existing projects have addressed housing affordability, and whether they are producing or have produced affordable products**—from the perspective of both the household (target market) and the developer.

Case study 1: Kenya

In this case study, the affordability has been crippled by:

- Unavailability of tax incentives to support the developer.
- Relatively expensive cost of funding through senior debt which made up the largest percentage of the financing.
- The reselling of units by initial buyers at relatively higher unit prices.
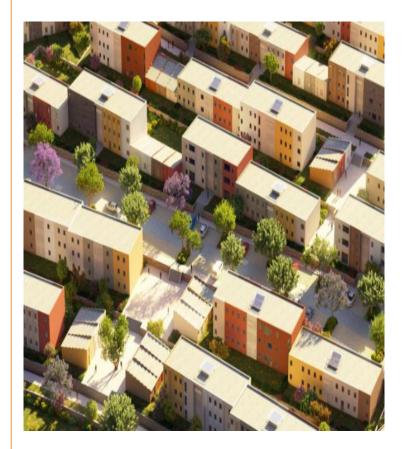
From the households' perspective:

- Unavailability and un-affordability of mortgages in the Kenyan market, with an interest rate of up to 13 percent and average tenor of 11 years, and required 10 percent minimum deposit, has locked out potential buyers.
- For this reason, the most common mode of purchase was instalment payment which favours individuals with an above-average household income and considerable savings.
- The tenants and buyers of the units earn approximately KES150 000 (USD1 500) per month (based on sample of households interviewed) which makes up only approximately 2.9 percent of the formally employed Kenyan population.
- Competing expenditure priorities are mainly household shopping, transport and school fees.

Case Study 2: Rwanda

Case study 2 findings: Rwanda

❑ To ensure targeting of the intended clientele, the developer makes use of property ownership information from the land centre, to find out if the applicant already owns property.

❑ On the demand end, it appears the clientele are mainly public sector employees who intend to reside in the units. To ensure affordability of the housing units, several banks have partnered with the developer to offer up to 100 percent mortgage facilities at an 11 percent interest rate and 20-year tenor.

Housing Affordability Project Progress Report

Summary

From the developer's perspective, key measures have been undertaken to ensure the units remain affordable:

- Provision of part of the development land

- Project design to ensure cost efficiency

- Minimal unit finishing such as floor tiling with no wardrobes

- Scalability to ensure economies of scale

- Use of AAC technology as opposed to the traditional brick and mortar as the former is price competitive and saves on time thus a resultant cost reduction

- Obtaining a government subsidy infrastructure grant, saving on development cost

- Provision of external infrastructure by the government through the district authority

The developer prioritizes first-time home buyers and makes use of property ownership information from the land centre, to find out if the applicant already owns property.

On the demand end, it appears the clientele are mainly public sector employees who intend to reside in the units. To ensure affordability of the housing units, several banks have partnered with the developer to offer up to 100 percent mortgage facilities at an 11 percent interest rate and 20-year tenor.

Applying the Supply-Side Affordability Framework & Calculator

In both case studies, the price set by the developer is *less* than the construction cost of the standard CAHF house in that country.

❑ In Rwanda, the case study 2-bedroom apartment (55m^2) is 42% less than the CAHF house. Use of a government subsidy for infrastructure and ability to obtain land at below-market rate, brought down the cost substantially. In comparison, the CAHF house cost is all-inclusive of land and infrastructure costs (at market rates).

❑ In Kenya, the case study is priced 22% less than the CAHF house, however, it should be noted that the CAHF house is 55m^2 while the Everest Park 2-bedroom unit is 84m^2. The availability of relatively affordable land with already existing external infrastructure assisted to bring down the cost of the units in the case study.

Conclusion

❑ The affordability calculator attempts to introduce more accuracy in understanding affordability in housing delivery in Africa.

❑ The findings from this project demonstrate the value of a calculator which allows for more nuance than the basic 30% rule for 'affordable'.

❑ Given that there is currently no universally agreed way of measuring what is affordable, this project therefore takes the first step by offering a project-level tool for determining affordability with available data.

❑ The framework considers both demand and supply side perspectives, and takes into account that local-level demographic and income data is often not available in many African countries.

❑ Link to dashboard -
   https://housingfinanceafrica.org/documents/32067/