Developing a Framework for Creating Sustainable Affordable Housing Schemes in Kigali City

Philbert Mbanza, Abedenego O. Gwaya, Titus Kivaa

Abstract: *Housing, literally is defined as buildings or other shelters in which people live, a place to live, a dwelling and to nations a critical component in social and economic system. Housing represents one of the most basic human needs. To most groups housing means shelter but to others it means more as it serves as one of the best indicators of person's standard of living and his or her place in the society [1]. It is a priority for the attainment of living standard and it is important to both rural and urban areas. These attributes make demand for housing to know no bound as population growth and urbanization are increasing very rapidly and the gap between housing need and supply becomes wider. This housing deficit has continued to accumulate over the years as a result of poor housing policy implementation by successive governments in Rwanda. Researchers in urban housing and community development face significant challenges in evaluating the success of efforts to improve urban neighborhoods and identifying underlying theories that might predict the success of future initiatives. Practitioners in this field confront political considerations, restrictive administrative guidelines and limited funding. It is important to mention that one of the main problems in African cities is that households invest in housing prior to the government's development of adequate infrastructure. This is the genesis of informal settlements and, as a result, many African cities are plagued with slums –a housing stock that does not have access to the kinds of basic infrastructure needed for cities to be able to serve as platforms for economic growth. Instead of cities serving as centers of agglomeration economies that they have provided around the world and throughout history, they instead become centers of diseconomies which impede rather than enhance growth prospects [2]. Rwanda has the opportunity to change the order of these investments with potentially enormous gains. If the government invests wisely it can avoid this looming problem and keep Kigali one of the most livable cities on the continent. However, this effort requires that the government take some "bets" on infrastructure investments prior to households overwhelming existing infrastructure. The question is, "Where to put the infrastructure, and how much to put down. This research highlights some of the framework and financing tools that can be employed to reduce the challenges in housing finance and cost of housing.*

Index Terms: *Framework for affordable housing, Housing Finance, Housing Schemes, Sustainable Housing.*

I. INTRODUCTION

According to the results of the survey on the living conditions of households (EICV) carried out between 2000 and 2001, more than three people out of five (60.29% of the national population) lives under the poverty line. Considering household, it was noted that the rate of poverty was 65.66% in rural areas, and 19.38% in urban areas respectively (Kigali City excluded); 12.27% in Kigali City. These results further indicate that poverty in Rwanda is predominant in rural areas. According to the same investigation, taking a "household" as a basic unit, it has been confirmed that poor households are 61.68% of the population of rural areas, 17.80% in the urban areas, and 10.44% in Kigali City. In spite of a favorable percentage in urban areas, the research revealed that the annual average expenditure recorded by an adult person in urban areas is only RwF35,000 (less than RwF3,000/month) in case of the "extremely poor" category of the population, approximately RwF55,000 (about RwF4,500/month) for the category classified as "poor", and RwF 232,000 (in secondary cities) and RwF255,000 in Kigali City for the category classified as "non poor".

These figures show that even for the category classified as "non poor", the amount of annual expenditure remains weak (RwF20.000/month). That means that a very large majority of the urban population constitutes of low-income households. This conclusion is corroborated by the fact that 60% of the urban population mobilizes only 20% of the consumer expenditure while at the same time only 10% of the population is able to mobilize above 50% of the expenditure [3]. The main objective of the study was to develop a framework for creating sustainable affordable housing schemes for the purpose of addressing the challenge of housing deficit in Kigali city. The specific objectives were to assess how accessibility to loans and low interest rates reduce the housing deficit in Kigali City. 2); establish how environmental factors affects the provision of affordable housing in Kigali City; establish how different housing finance models can increase the number of affordable housing in Kigali city; establish how a saving scheme for housing sandwiched with housing development can reduce the housing deficit in Kigali city; and identify the solution to the problem of housing deficit in the city of Kigali.

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II. BACKGROUND

Housing is the leading component of urbanization, it is more numerous, more extensive, and represents more investment than any other single use. Housing is fundamental to the health and well being of families and communities. For this reason access to quality, affordable housing is critical in any society. The housing demand and housing supply levels arising from the falling levels of public funding, the incomes that is not sufficient, and a large scale of population growth and the high rates of urbanization makes the issue even more complex. The situation even becomes more serious and worrisome when one realizes the fact that despite a number of political, social and religious initiatives taken in the past in Rwanda, a large proportion of the nation's population still lives in sub-standard and poor homes. The whole country, the level of earnings and job market especially in the public sector is very low. This renders the employees 'lack of savings for banks to offer loan facilities. The banks' interest rates are also high and cannot offer an opportunity for an individual to access credit facilities. The market forces controlled by the private sector play a much bigger role in determining housing provision and hence exploiting the economically weak groups in die lack.

The Rwandan government has had various interventions and huge investments in housing provision but the housing problems in the country still remains intractable as many rural and urban population do not have access to decent, safe and affordable housing. This is as a result of the government inability to provide sustainable and adequate affordable housing to the population. However, the researcher sought to develop a framework for creating sustainable affordable housing schemes for the purpose of addressing the challenge of housing deficit in Kigali city.

III. LITERATURE REVIEW

A. Overview of Housing Sector in Rwanda

The development and adoption of the National Urban Housing Policy aims at guiding Government objectives and priorities in line with the objectives as laid down particularly in the Vision 2020, the EDPRS, and the National Investment Strategy. According to the aims of Vision 2020, about 30% of the population will live in planned cities with access to basic infrastructure necessary to ensure sustainable development (MININFRA, 2008). It has been forecasted that the urban population will reach 30% of the national population by 2020; however, urban development should not contribute towards pollution of surrounding zones (sub-urban and rural areas). Due to fast growth of the population with limited resources there is a need of affordable houses.

The National Urban Housing Policy includes all public interventions within the framework of the urbanisation process of Rwanda in order to constitute the urban structures at national and provincial level, to improve urban management, control development, and the spatial expansion of cities, particularly urban centres using effective planning tools. Urbanization comprises the establishment of procedures and tools for urban planning (Master Plans, Urban Development Plans) zoning and re-zoning, and the upgrading of unplanned settlements with the provision of adequate social infrastructure facilities.

B. Housing Investment Opportunities in Rwanda

Growing financial sector experience and increasingly sophisticated financial instruments are driving investor interest in African real estate especially in Rwanda. This includes new market opportunities related to a rising urban middle class, an increasingly localized construction material industry and innovations in housing finance such the emergence of Real Estate Investment Trusts and mortgage liquidity facilities like Mortgage Backed Securities across Africa. However, a key barrier to this growth remains the continuous lack of rigorous data on the breadth and character of financial infrastructure investment. This is particularly true for the housing sector as stimulating targeted investments requires highly differentiated data that illustrates market segmentation as highlighted in the table below.

C. International Perspective on Affordable housing

There are various issues impacting affordable housing worldwide such as economic factors public policy/institutional factors, land supply and planning policy, housing design and size, housing construction costs and methodology, tenure, financing and others. House prices and rents, on the other hand, have grown ahead of general inflation. Making matters worse, the composition of houses for sale and rent on the market has been inexorably shifting towards very expensive house [1].

The problem of affordable housing has been a concern for both the government and individuals. Appreciating these problems, both public and private sector developers make effort through various activities to bridge the gap between housing supply and demand, but the cost of building materials, deficiency of housing finance arrangement, rigorous loan conditions from mortgage banks, government policies amongst other problems have affecting housing delivery significantly in Nigeria [4].

Affordability can be evaluated in various ways that lead to very different conclusions as to the nature of the problem and the best solutions. In the past, experts often defined affordability as households spending less than 30% of their budgets on housing, but since households often make trade-offs between housing and transportation costs, many experts now recommend that affordability be evaluated based on lower-income households' ability to spend less than 45% of their budgets on housing and transport combined [5]. The factors that affect supply of housing include land and land tenure, housing finance, housing construction, and services and infrastructure.

D. Land and land tenure

Land is the central to addressing housing affordability and it represents a major problem in home ownership, it is believed that a potential solution to housing affordability is available through large scale release of newly subdivided land on the urban periphery. However, the cost of residential land has increased in real terms much faster than the building cost in Kigali.

In any discussion about housing affordability trends it is important to recognize that it is the land component of a house that has been increasing most in real terms. The types of land tenure in Kigali are customary, freehold and leasehold. Customary tenure is widely in the rural areas. In this type of tenure land use is governed by customary and cultural values. In freehold, the interest in land goes in perpetuity, while leasehold tenure involves a contract and a grant of an estate in land. While the supply of broad hectare land is not the only factor impacting rising residential lot prices (and hence housing affordability) it is certainly the most significant factor and needs to be specifically addressed in council strategic planning decisions.

E. Housing finance

The main issues that are addressed in the construction sector are: building materials, regulatory instruments and technical support. Building materials are the largest input into house construction, and therefore need to be available and affordable. This is a very critical issue where governments trying to provide low cost houses have to be careful. Unavailability of affordable material can lead to incompletion of good low-cost housing projects. Kigali city had adopted a low-cost model house worth US$ 10,000. Most of the building materials, especially bricks in this model, are made on site which further cuts down construction costs by eliminating transport and distribution costs. Building Acts, regulations and codes are the means by which authorities control construction activities for the purposes of ensuring safety and health in the built environment.

F. Services and Infrastructure

Installation of services in the form of roads, water supply, sewerage, drainage and other utilities are part of the components for suitable housing. The capital required to install these services is high, and the further these services have to be carried the more expensive they become to install because of the long distance. The city does not have enough financial capacity to service all land, especially land occupied by low income households. Most low-income households are usually located on undesirable land which may require large capital to install services. The cost of providing infrastructure is therefore directly proportional to availability of serviced land and accessibility thereof. Access of such facilities to low income households is very costly.

G. Strategies for affordable housing in Kigali

Some developing countries have been able to provide the bulk of their population with housing that is economic and yet meets reasonable welfare requirements. Sites and services and squatter upgrading and slum improvement schemes have turned out to be the best way to provide housing and services the poor can afford in low developing countries. Rwanda and the City of Kigali are no exception to this approach. There are attempts on such approaches, as was elaborated, that require re-enforced financial and policy support for densification and full realization of the potential in their approaches.

H. The Government's initiatives on Affordable housing

The Government has attempted to address the problem of housing deficit through ministry on infrastructure (MININFRA) and Rwanda Housing Authority (RHA) has come up with a couple of initiatives. The initiatives include subsidized housing facilities through Commercial banks where incentives like tax holidays, mortgage financing and tax exemption on construction materials especially for big construction projects.

The GoR has shown commitment towards rapid and inclusive development, and recognizes the role which urbanization should play in realizing programmes like Vision 2020, Economic Development and Poverty Reduction Strategy (EDPRS2), the seven-year Government programme, National Strategy for Transformation, NST1 (2017-2024) and the draft vision 2050. There are new policies that have been adopted to facilitate the implementation of affordable housing plan. These include the housing policy, the investment code which aims at facilitating investors to invest in key earmarked priority sectors including housing, as well as the prime minister's instructions No004/03/11/2015 determining the government support to investors in affordable housing and other legislation instruments on low-cost housing.

The development of modern master plans, housing policies, land registries and green urbanization strategies has registered a high level of effectiveness and impact. For example, this can be seen through: (i) Local and urban development plans, both conceptual and detailed for priority sites for all 30 districts; (ii) the development of local urban plans for the 7 emerging centers; (iii) the renovation of urban streets for the City of Kigali was completed and that of Musanze, Huye and Nyagatare is on-going; (iv) the revision of the existing master plans for 6 secondary cities; (v) Land One Stop Centres to support the implementation and management of the National Housing Policy established in all districts; (vi) Facilitating the acquisition of affordable materials and equipment which are environment friendly; (vii) Mobilization of private investors to build affordable houses.

IV. RESEARCH METHODOLOGY

The instrument that was used is the questionnaire, we adopted the questionnaire because of its very many advantages. The questionnaires were structured to consist both closed and open-ended type of questions in order to elicit enough feedback from respondents. The dependent variable, the cost of a home in the city of Kigali, is a measure of housing affordability. The previous literature supported my use of housing affordability as the dependent variable in regression studies. Housing affordability reflects several factors, including the overall stock of housing; the distribution of housing prices; long-term financing; income, laws, and regulations affecting the housing market; and individual economic choices. However, this thesis focused on the cost of housing to measure affordability.

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The theoretical model for the analysis included the price of housing as a function of house size characteristics, house structural characteristics, neighborhood characteristics, foreclosure characteristics, location characteristics, and land use ordinance characteristics as general causal factors that affect the cost of housing.

The questionnaires were tested with a representative sample of engineer in the city of Kigali was administered. The results of the pilot study helped to identify necessary changes that should be affected in the questionnaire to improve the instrument prior to data analysis indeed. Primary data from the questionnaires were analyzed using descriptive statistical analysis of quantitative. Data was fed into the computer and analyzed by a computer through excel. In this method of analysis measures of central tendency was obtained to determine the expected scores from the sample in the study.

V. RESEARCH RESULTS AND ANALYSIS

Questionnaires were administered to gather pertinent information. An analysis of the data and information collected confirmed that indeed the selected factors do affect affordability in a significant way. The study circulated 149 questionnaires to various respondents in all the sectors under investigation (institute of Engineers, institute of architects, government bodies and city of Kigali). At the end of the data collection exercise a total of 120 respondents gave feedback out of the possible 149 respondents representing 80%. The study showed that majority of the interviewees were middle aged. Findings indicate that among the 120 respondents, 44% are female and 56 are Male. The gender is slightly lower than that of males which is normal with Rwandan culture, the participation of female in housing ownership is low but again one would say that the number is quite impressive which means that they have now began to purchase or participate in ownership of houses.

The study found out that infrastructure, interest rates, accessibility to loans, and lack of affordable housing schemes affected the number of affordable houses in Kigali City and hypothesized that affordable housing is subject or dependent to a host of factors. However, each of these factors was meant to carry different weights and hence affect housing affordability differently. Given the number of respondents (60%) who own homes, one would presuppose that housing is not that affordable in Kigali city. However, as indicated from the study there is a strong relationship of home affordability with the selected factors namely access to finance, interest rates, basic infrastructure subsidy. And absence of housing financing schemes.
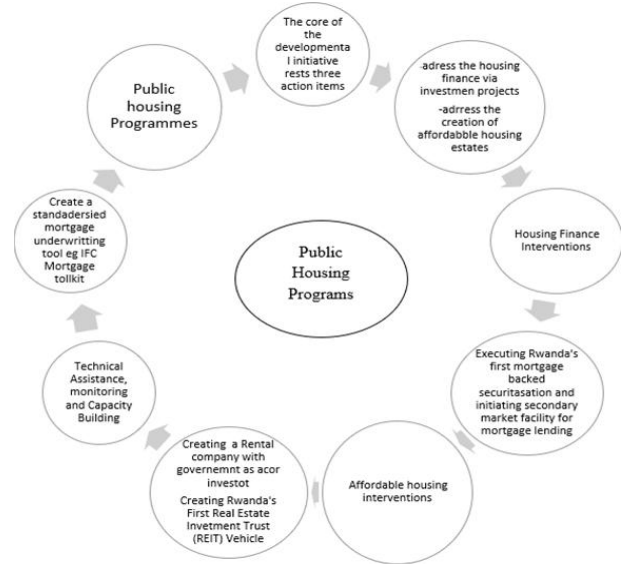
Figure 1: Framework for Sustainability of affordable housing Programme

Figure above shows the graphic illustration of the proposed framework. It is evident from this illustration that there are five key components of the framework, namely public housing programs, introduction of Housing Finance Schemes, social-economic and demographic attributes of beneficiaries as well as the sustainability of public housing programs, housing finance programmes, housing policies.

VI. CONCLUSION

Even though there are other determinants, the study found out that income, interest rates, access to finance, land prices and absence of affordable housing schemes have a significant effect on home affordability. From the analysis it was noted that an increase in access to finance, lowering the interest rate and introduction of housing financing models would increase the housing affordability and reduce the housing deficit in Kigali City. It is thus evident that all the selected determinants do affect housing affordability in the area of the study. However, from the analysis above we were able to deduce that interest rate, access to finance, infrastructure subsidy and housing finance models are positively correlated to housing affordability well as housing prices are negatively correlated. From the study however, it was not clear how land prices would affect the housing affordability. more research in this area is needed to determine how the land price would positively affect the housing affordability. There is a strong relationship between affordable housing and interest rates, access to finance, infrastructure subsidy and housing finance schemes.

It is clear that in Kigali, housing need and housing demand will increase dramatically in the coming years. Satisfying that demand is important not only for the city's functioning and the well-being of the city's citizens but will have significant implications for the country's economic growth. It follows that the planning steps taken to accommodate this demand through the provision of infrastructure and the regulations that govern housing supply are key policy measures.

It was evident from the study that there are high levels of low disposable incomes and therefore the government should come up with modern housing policy. The housing policy should cover issues such as monitoring and evaluation of the housing sphere, carry out research on housing, address Guaranteed Mortgage Schemes that would support non salaries persons, tackle social housing, introduce housing finance model like real estate investment trusts that would come up with rent to own schemes, introduce securitization of mortgages that would increase liquidity in commercial banks to cater for mortgage financing, introduce rental housing companies to come up with decent housing for rentals.

Ultimately, the government will invest more on infrastructure, utilities and housing hence making costs towards housing less expensive. More to that, Guaranteed Mortgage Scheme and MBSs will make mortgage cheaper and affordable to most people. Lastly, the housing policy should be able to carry out research on alternative building technologies which are cheaper and affordable to most middle- and low-income earners.

The government should also lower interest rates and taxes on mortgages to make them affordable to most people. In addition to that, other lending institutions such as micro finance institutions and SACCOs should be registered and empowered to increase their housing finance lending capacity. Such a move will cover the middle and lower classes who are the majority. More so, mortgage lending institutions should try and improve their long-term lending capacity, this is necessary so that they can be able to lend for periods more than twenty years, additionally, they should also try and give more people access to finance at low-interest rates, lastly, alternative and cheaper building technologies should be espoused by the prospective homeowners and real estate agents.

More so, the government should create Rwanda's first REIT vehicle and seed it with equity funding for the government financial institution like BRD and other investors. First REIT's business model will be to buy and own for long-term use homes produced in large-scale estates for the purpose of renting them or creating rent-to-own programs for worthy tenants. First REIT would project to purchase between eight and ten percent of the production from upcoming estate developments for rental options.

we would also recommend the government to be the sponsor (through a financial institution like BRD) and key investor in a facility, Construction Finance Facility or CFF, to source large sums of capital for the purpose of providing construction debt financing to worthy large-scale housing production projects. In addition, CFF would become a repository of experienced and highly skilled bankers in the field of construction finance by actively recruiting banking professionals wherever they are found. This Facility would work in syndicates with worthy banks in Rwanda who are interested in developing their own construction finance departments and prefer working under their own corporate identity. The mentoring and opportunity to develop individual track records can have a high developmental impact.

ACKNOWLEDGEMENT

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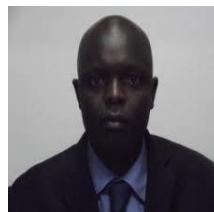
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