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## Profiling Housing Co-operative Models in Addressing Shortage of Affordable Housing in Nairobi City County, Kenya

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### **Abstract**

*Housing is a fundamental right and every person is entitled to this basic need. However, the biggest challenge facing Kenya is lack of affordable housing especially for low- and middle-income households in urban areas. We profile housing cooperative models and examine their suitability in addressing shortage of affordable housing in Nairobi City County. Specifically, we: (i) profile housing cooperative models adopted by housing cooperatives in Nairobi City County and (ii) examine the suitability of the models in provision of affordable housing. A qualitative approach using semi-structured interviews was adopted to generate data on how the housing co-operative models formed, membership characteristics, management practices, financing models and ownership practices. The paper is anchored on transaction cost theory. The target population consists of all active housing cooperatives registered by the State Department of Cooperatives in Nairobi City County as of December 2017. The sample size selection for this exploratory study was based on data saturation criteria. Purposive sampling technique was used to select 10 key informants, based on their technical expertise and knowledge. Thematic content analysis was used to analyze the qualitative data. Findings revealed that the limited housing cooperative model is most used among the members of housing cooperatives in Nairobi City County. However, the model failed to take into consideration collective efforts of members in terms of collective housing construction which bring down the total cost of construction. The paper recommends restructuring of housing finance system to take into consideration issues of low- and middle-income households for adoption of a multiple mortgage housing cooperative model.*

**Keywords:** Housing Co-operative Models, Kenya.

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### **INTRODUCTION**

Housing should be viewed as a basic human need and not as commodity for speculation for profit in open market (Marcuse, 2020). According to Maslow's Hierarchy of Needs shelter or housing is rated in the first tier of needs which is a five-tier model of human needs (Ikpeme *et al.*, 2016). However, many people cross the globe lack this important basic need. World Cities Report (2020)

projected that over 1.6 billion people, or 20% of the world's population live in life-threatening structures accelerated by rapid urbanization, rural to urban migration, high rate of poverty, and social economic disparity among the people. A study by Alteneiji *et al.*, (2019) argues that many governments worldwide are committed to finding a long-term solution for affordable housing which is

affecting the societal development. Malatest and Associates (2018) argued that one way of providing affordable housing to low- and middle-income household is through the housing cooperative model.

Profiling housing co-operative models can be the first step in addressing the housing shortage (Milligan *et al.*, 2016). Profiling is a collaborative information-gathering process to assist in recording, classifying and analyzing the behavioral patterns, business characteristics, trends, requirements, relationships, and structures of cooperative models so as to assess or predict their capabilities in provision of affordable housing (UN-Habitat, 2011; Jacobsen and Cardona, 2014). The housing cooperative model has been recognized globally as an appropriate way to bring together people from different background with a shared vision to realize their housing needs (Sørvoll and Bengtsson, 2020). Centre for Affordable Housing Finance (2017) posits that housing cooperative is a legal association formed for the purpose of providing housing to its members on a continuing basis. A study by Ganapati (2014) postulates that profiling housing cooperative models provides a foundation for community building and shared responsibility through innovative housing design and inclusive resident governance structures leading to affordable housing. In addition, contribution of profiling housing cooperative models a cross the globe can be evidenced by the provision of large number of housing stock. For instance, in Poland 75% of the total housing stock was delivered by housing cooperatives, in Norway 50%, and in Sweden 17% (International Co-operative Alliance, 2012).

In developed countries profiling of housing cooperative models has made

progress in addressing housing needs particularly in urban centres. Malatest and Associates (2018) found that the rental co-operative model adopted in Austria, Canada, and the UK, increased security of tenure, high quality of housing, and affordability. Similarly, Austria, Denmark, France, Switzerland, Uruguay and the USA adopted limited equity co-operative model and reported lower cost, high quality of homes with better security of tenure, and lower equity risks which is in line with transaction cost theory (Crabtree *et al.*, 2019). In addition, the residents in the market equity cooperative model adopted in Norway and the USA demonstrated greater satisfaction about management quality, building quality, building security, and low crime rates (LaPalme, 2018). Finally, in Germany, Australia, Canada, the predominant model is a non-equity cooperative model. The main purpose of this model is to provide long term affordability of cooperative housing without financial gain (Malatest & Associates, 2018).

Profiling of housing cooperative models in African countries has not been given the necessary support to facilitate provision of affordable housing to various socio-economic groups of members. However, some countries have tried to profile various housing cooperative models according to the members needs in order to increase provision of affordable housing. For instance, Nigeria profiled three housing cooperatives models namely: - restricted housing co-operative model, multiple mortgage housing co-operative model and continuous housing co-operative model reduced housing backlog with great margin (Azeez and Mogaji 2017). Similarly, in South Africa, profiling housing cooperative models lowered the cost of constructions through development housing

co-operative model and continuous co-operative model (Ganapati, 2014; Jimoh and van Wyk, 2012). While in Tanzania, limited objective cooperative and mutual ownership model were found effective in reducing the total cost of affordable housing.

As housing costs in Kenya's Nairobi Capital City continue to rise to exorbitant levels, a housing cooperative approach may be a realistic and financially sound solution for people and families with low- to moderate-income households (World bank, 2017). With an expected yearly demand of 200,000 units and an estimated annual supply of 50,000 units, the housing backlog in Kenya has reportedly reached two million units (World Bank, 2018). Kenya's government launched a number of initiatives to solve the housing shortage. These strategies included establishing the National Housing Development Fund (NHDF), the Kenya Mortgage Refinancing Company (KMRC), slum upgrading, public-private partnership cooperation, and social housing. Still the progress is not impressive to cater for huge housing deficit.

According to Githira (2016), the government evicted people to allow for infrastructure expansion, but there is no resettlement strategy, no tenure security, and a lack of significant policy support for poor housing expansion. According to international institute for environment and development, high-rise informal dwelling types that violate planning and building codes coexist in Nairobi City County. Approximately 70% of Nairobi residents live in single-room apartments in informal settlements and tenements as the city transitions from low-density shacks to multi-story tenements (IIED, 2019). The

government's current housing strategies for the poor appear to have failed in terms of reaching the poor, meeting the level of affordability, and housing volume in relation to demand due to a number of factors, including a lack of recipient involvement, a lack of funds, and actor coordination and communication (World Bank, 2017). This calls for a fresh approach that may address the issues with top-down policies that are now plaguing the system.

Profiling of housing cooperative models can be the first step in addressing unique challenges facing housing sector in Kenya. As noted by Ganapati (2014) there is a need for housing co-operative to explore various models and practices that exist, their role and opportunities towards achieving affordable housing. Indeed, several authors have call for exploration of dilemma involved in housing co-operative sector in provision of affordable housing and particularly the tension surrounding housing co-operative models and practices (Ganapati, 2014; Czischke 2018; Malatest and Associates 2018). Ochieng *et al.*, (2017) argue that housing has never been a priority for most developing nations, including Kenya. This means that even compiling data for this sector is not a priority for decision makers at county and national level. A member needs sufficient information to make the best decision, yet the data available about cooperatives is, at best, subpar (Brown *et al.*, 2015). Rarely are thorough endeavors made to compile substantial amounts of reliable, cogent, and comparative data (Galhardi, 2016).

There has been very little research on these topics in housing cooperatives in Kenya. For instance, UN-Habitat, (2010) conducted study on organization,

management and finance of housing cooperatives in Kenya and found that housing cooperative are able provide sustainable and affordable housing to the informal settlers. Kieti *et al.*, (2020), Mwau *et al.*, (2019), Gardner *et al.* (2019), Petrus and Newman (2019) and Mose *et al.*, (2018) observed that affordable housing has affected a number of factors such as inefficient system of land registration, unaffordable finance, limited supply developable land, speculation of prices of land, lack of physical and social infrastructure and inappropriate policy and regulation. Other studies, such as Onchieku and Ragui (2019), investigated the importance of strategic leadership on performance of housing co-operative societies in Nairobi City County. While we appreciate the literature on international studies that would provide a greater understanding of the models and methods used by many nations throughout the world. However, it is not advisable to replicate the "best" housing cooperative model to another country because of legal, social-economic, political, cultural differences that may not be compactable to another country.

In light of this, the study aimed to investigate a more thorough and critical analysis of housing cooperative models using Kenyan context in the following thematic areas: the formation, ownership, financing and management. The ultimate goal of profiling housing cooperative model is to answer the following questions; what are the cooperative models that exist in Nairobi City County? What is the most commonly adopted model in Nairobi City County, Kenya? What are the features of each model? Which model is best suited to provide affordable housing for cooperative members? Only by profiling housing cooperative models can these

questions be answered. In order to improve the housing cooperative sector in Nairobi City County, the study aim at profiling housing cooperative models to produce relevant information needed to make informed policy decisions.

**Guiding theory:** The concepts of transaction cost economics are used to explain the strategies organizations take to develop strategic partnerships in order to improve organizational performance. Therefore, the fundamental idea of transaction costs is to ensure that there is flow and sufficient information that inform decision making. Transaction cost theory was coined by Williamson (1975) who defined transaction costs (TC) as expenses caused by internal business operations of firms. In this respect, transaction costs vary from one firm to another based on efficiency and maybe economies of scale (Wiesner, 2017). This idea guides business organizations to seek for strategic partners to avoid losses. The foundation of transaction cost theory is the notion that one can outsource while still maintaining a competitive advantage, for instance by consistently exceeding customer expectations. The trade-off in TC is between control and cost-sharing factors (Bahli and Rivard, 2017).

The transaction cost theory has been co-opted to housing cooperative to demonstrate how the cost can be minimized through profiling housing cooperative models. The aim of profiling housing cooperative models is to ensure that there is abundant information available for members of cooperatives as well as government agent and policy makers in order to base their decision on data. Profiling of housing cooperative models would create strategic alliances that facilitate provision of affordable housing and risk sharing hence lowering the cost of housing. Second, through profiling housing cooperative models formed alliances or joint ventures

who share similar objectives, such as maximizing service delivery and cutting costs would have sufficient information is needed. Lastly, profiling housing cooperative models give specific details of each model that help the decision makers to allocate adequate resources to each model without generalization. Therefore, housing cooperative models are involved in extensive housing activities that can be expensive and complicated, necessitating a sufficient flow of information from one entity to another.

### **METHODOLOGY**

The exploratory research design was used in this study. The goal of this study is to provide a detailed description of each housing cooperative model's characteristics without evaluating causal relationships or using an experimental control. The study's design, which focused on a qualitative approach based on key informant interviews and document analysis, was used to explore and profile the housing cooperative models in terms of their characteristics in order to answer the research question of the study. The qualitative technique was used to analyze housing cooperative models (Mason, 2002). According to Sue and Ritter (2012), exploratory studies do not try to look at a representative sample of the population, instead, they typically look for people who are knowledgeable about a subject matter. In the same vein, Patton (2002) suggests employing purposive sampling approaches for selecting key informants, based on technical expertise and knowledge, in our case expertise and knowledge in the cooperative sector.

All members of active housing cooperatives registered by the State Department of Cooperatives in Nairobi City

County were targeted. Sample size was selected based on the idea of data saturation, as previously recommended for thematic content analysis by Javadi and Zarea (2016). In phenomenology, the sample size is increased in multiples of 10, 20, and 30 for as long as saturation is not reached after a small sample of 10 KIs has been collected and evaluated. The first batch of 10 KIs were selected based on phenomenology sample size selection procedure, it was found that already saturation point was reached therefore there was no need of taking another batch of 10 KIs. Purposive sampling technique was used to select 10 KIs for the study based on their positions, experience, and knowledge in the housing cooperatives in Nairobi County. The KIs included government officials, union leaders, and the housing cooperatives officials Nairobi City County.

Each interview lasted roughly an hour and took place at their respective offices. The interviews were taped using electronic audio equipment. The audio files were then converted into text for examination by transcription of the recorded audio files. The qualitative transcribed text data were coded, and coded data were extracted using Atlas software. The interviews were conducted from August 16 through August 30, 2018. All the interviews were conducted face to face and transcribed verbatim.

Document analysis complemented the main data key informant interviews. The purpose of document analysis was to further explore the housing cooperative profiles and utilize key informant interview data to supplement it. Selected housing cooperative documents, such as the member passbook, title deed or certificate of lease, and service

charge register, served as the primary sources of data for document analysis. The topic categories focused on the profile of the various housing cooperatives models, such as cooperative formation, funding, ownership, and management aspects.

Thematic content analysis was used because the data was qualitative in nature. Thematic content analysis focuses primarily on locating patterns or themes within qualitative data, which the study saw as the profiling of housing co-operative models (Braun and Clarke, 2006). The following steps were followed based on the Braun and Clarke (2006) approach for thematic content analysis: familiarization with the data, creation of initial codes, search for themes, review of themes, definition of themes, and write-up.

For the purpose of familiarization, the transcripts from the audio files were read out repeatedly. Patterns of the themes progressively became apparent as the transcripts were read out again. The latent themes approach used in this study was based on the identification of concepts from empirical studies. After becoming familiar with the data, it was discovered that expectations of primary housing cooperatives versus the overall situation of the sector, rather than specific housing cooperatives, dominated the responses from the officer of the state department. Therefore, when creating the original code, the responses from state department officials were heavily taken into account. Initial codes were created from the data transcription, and themes (concepts) based on each interviewee's responses were looked for as words and texts that appeared in the transcribed file. On the basis of the concept patterns, initial codes were generated

for each question. Then, the codes were searched for the themes.

In this study, the majority of the questions' codes themselves formed the themes. The ideas of internal homogeneity and exterior heterogeneity were taken into consideration when reviewing the themes derived from the initial codes. By reviewing the data in light of the principles, it was hoped to confirm that the themes are clearly distinguishable from one another while the data inside them are meaningfully related to one another. Due to their homogeneity or shared antecedents at this point, some themes were combined with others or used in combination with others to generate new themes (Javadi and Zarea, 2016).

Further refining of the themes was done to after which a write-up of the findings was done after the topics were examined and clearly identified. The write-up entailed preparing a summary of the results in terms of the occurrences of each theme. According to the questions posed, the write-up was arranged in the results section. The study summarized the information gathered from the housing cooperatives by determining the characteristics of each that most accurately represent each model based on the information gleaned from the thematic analysis.

The appropriateness and suitability of the housing cooperative models were analyzed using Strength, Weaken, Opportunity and Treats (SWOT) on the data collected from housing cooperatives in addition to the exploration that showed the characteristic description of the model profiles. By examining and reporting factors that encourage the acceptance of the models as well as factors that inhibit the adoption of the models. The SWOT analysis served as the

foundation of determining the models' appropriateness.

## **FINDINGS AND DISCUSSION**

### **Profiling housing co-operative models**

The profiling of housing co-operative models is based on exploratory key informant interviews conducted to define the various housing models based on the formation, ownership, finance, monthly costs, maintenance and repairs, membership formation and property management as guided by the literature. Key informant interviews provided the primary data for this exploratory study supplemented by document analysis. The exploration was carried out according to the prescribed steps, starting with the initial code generation and ending with the classification and review of the themes found using both latent themes and semantic themes, where original information was revealed.

Three housing cooperative models are practiced in Nairobi City County, namely, Limited Housing Co-operative Model (LHCM), Multiple Mortgage Housing Co-operative Model (MMHCM), and Continuing Housing Co-operative Model (CHCM). The profiling defined and explained the models as well as investigated the motivations behind housing cooperatives' adoption of the models. The investigation reveals similarities and differences among the models identified (Table 1).

### **Limited Housing Co-operative Model**

A Limited Housing Cooperative Model is one in which members raise funds to buy land, which is then divided into plots and distributed to members in accordance with their shares deposits. Share deposits and shares capital differ in that share are not refundable but can be transferred and for

single member's shareholding is limited at 20% of the total shareholding of the cooperative. Share deposits, on the other hand, have no upper limit and are refunded to members upon request.

Forming a housing cooperative was motivated by the desire of members acquiring land for housing development. It was discovered that housing cooperatives adopted LHCM was for the purpose of access to land, finance and other resources for improving their living standard. Additionally, it was discovered that the housing cooperatives utilizing this model were disbanded once each member acquired their own plot (Nguluma, 2016). This sentiment was supported by by-laws of the Housing Cooperative #3 plainly stated that the purpose of the housing cooperative's formation was to acquire land for its members.

While the LHCM was only intended to buy land and subdivide it into plots, other housing cooperatives occasionally extended their mandate to housing. According to KI from Housing Cooperative #6, who was supported by eight KIs from other housing co-operatives.

*The major and occasionally the only goal of founding a housing cooperative is land acquisition for its members. However, those housing cooperatives who went beyond just purchasing land ran into major financial issues, and their projects were never completed. (KII, August 2018; Nairobi).*

It is evident from the KI that members join the housing cooperative with the purpose of becoming landowner. However, when the housing cooperatives extent their objective to housing provision, they find themselves unable to finance their housing development.

Table 1: Differences and similarities among the housing cooperative models

	<b>Limited housing cooperative model</b>	<b>Multiple mortgage cooperative model</b>	<b>Continuing Cooperative model</b>
<b>Formation</b>	<p>Members formed the housing cooperative for the purpose of acquiring land for housing development.</p> <p>Once the objective of forming housing cooperative is achieved the cooperative is dissolved.</p> <p>The housing cooperatives is involved in land buying business for their members</p>	<p>Members formed the housing for the purpose of acquiring affordable housing</p> <p>The objective of forming housing cooperative is provision of housing in continuous bases</p> <p>The housing cooperative main objective is to provide housing in continuously bases to current and incoming members</p>	<p>Members formed the housing cooperative for the purpose of serving members and non-members</p> <p>The objective of forming the housing cooperative is to provide more additional income to the founding members</p> <p>The housing cooperative has closed membership and their major objective is to make addition revenue to their members through rent.</p>
<b>Ownership</b>	<p>Members obtain title for their land and building directly from the housing cooperative.</p> <p>Each member has the exclusive right to own a piece of plot according to their shares</p> <p>Each member has exclusive right to title deed of his or her plot</p> <p>The corporation does not own any land however land is owned by individual members</p>	<p>Members are the sole owners of land and buildings.</p> <p>The housing cooperatives owns common facilities. Each member has the exclusive right to occupy a particular dwelling unit in perpetuity.</p> <p>Each member is entitle to title deed plot or unit.</p>	<p>The housing units or apartment is owned collectively by the housing cooperative members.</p> <p>Each member has exclusive right to occupy particular housing unit based on his or her shares</p> <p>The housing units or apartment can be used by non-members at market rates</p> <p>The housing cooperatives owns collectively land, building and common facilities</p>
<b>Financing</b>	<p>Members finance their housing unit/plot through their personal savings, relatives and friends</p> <p>Members are not obligated to make monthly carrying charge payments to the cooperative.</p> <p>Members with share loans (if any) are personally liable to their share lenders for the amount of the loan.</p>	<p>Members have personal liability on cooperative's blanket loan.</p> <p>Members are obligated under occupancy agreements to make monthly carrying charge payments to the cooperative.</p> <p>Housing cooperative borrow funds from cooperative bank, KUSCCO, SACCOS and NACHU</p> <p>Members with share loans (if any) are personally liable to their share lenders for the amount of the loan.</p>	<p>The members have personal liability on cooperative's blanket loan.</p> <p>The loans and other liabilities are financed by monthly revenue collected through rent</p> <p>The housing cooperative can also be financed from cooperative bank and NACHU, SACCOS and KUSCCO</p> <p>Member residents are obligated under their leases to pay monthly rent to the end of the lease term</p>



*Housing cooperatives and affordable housing/Onduko, Kaleshu & Ndiege*

<b>Monthly Costs</b>	<p>Each member pays monthly carrying charges for maintenance of his or her plot/ housing unit</p> <p>Members with share loans make individual principal and interest payments directly to the share lender.</p>	<p>Members pay monthly carrying charges to the cooperative for repairs and maintenance</p> <p>Members with share loans make individual principal and interest payments.</p>	<p>Residents/ members pay monthly rent specified in the lease to cater for loan, repairs and maintenance of the building</p> <p>Housing cooperatives pay for monthly for mortgages loan principal and interest, insurance and other services related to the building</p>
<b>Maintenance and Repairs</b>	<p>Individual unit/plot owner is responsible for all dwelling unit maintenance and repair</p> <p>The Cooperatives has responsible to create pathways within the plots and providing fencing services</p>	<p>Individual member has responsibility to repair and maintenance his or her housing unit</p> <p>The housing cooperative repairs and maintain the common facilities</p> <p>The housing cooperative hired resident members to provide maintenance and repair services.</p>	<p>The housing cooperative is responsible for both interior and exterior repairs and maintenance of the apartment</p> <p>The housing cooperative hire third part to provide repairs and maintenance of the property</p>
<b>Membership Formation</b>	<p>Members purchase the share proportionate to the number of plot or units he or she wants to own.</p> <p>The purchase price for member is much lower compared to non-member who wish to purchase plots through housing cooperatives</p> <p>The housing cooperatives use savings as down payment for the land they want to acquire.</p> <p>The member can reseller his/her plot or unit at a market rate</p>	<p>The member purchase share equivalent to the number of housing units he or she wants to own.</p> <p>The member can resale his or her housing at market rate</p> <p>Non-members pay high price than members</p> <p>The purchase price take into consideration the loan balance and inflation rate</p>	<p>The member who wish to leave the cooperative can sale his or her share in open market</p> <p>Housing cooperative has powers to approve or disapprove new member in joining the housing cooperatives</p> <p>The new member must be prepared to take new role of memberships in the cooperative</p> <p>The new member becomes obligated to pay monthly rent according to the rule and regulation governing that housing cooperative.</p>
<b>Property Management</b>	<p>Individual members take personal responsibility of their plots.</p> <p>The housing cooperative is dissolved once their objective of acquiring land is achieved</p>	<p>Member democratically elect their official at the AGM</p> <p>The resident members take care of their estate by having regular meetings.</p> <p>The executive board take in charge of the estate in terms overall management of the property and employees</p>	<p>Resident members take in charge of their housing cooperative through elected leaders</p> <p>The housing cooperative hires and oversees property management and employees.</p>

Regarding financing the model, the principal financing option for land acquisition was member contributions/ savings. However, alternative methods of financing were confirmed by the member passbooks from Housing Cooperative #5 showing loan deduction towards for land payment. In addition, loan schedule register accessed from National Cooperative Housing Union listed housing development loans from development partners.

The piece of land acquired by housing cooperative was individually owned. In 2017, 100 titles were issued to the Housing Cooperative #3 evidenced by member register book. The legal ownership under this model was evidenced by the issuance of land title, however, Housing Cooperative #7 and #8 only issued allotment letters or certificates to its members as sign of ownership.

The minute book for nine housing cooperatives revealed that they held Annual General Meetings (AGMs) every year, according to the cooperative society Act and the cooperative bylaws. Members exercised their democratic right to choose their leaders at the annual general meeting. It was noted that during AGM members approved the annual budget for the cooperative and appointing the new auditor. Site visit was programmed in their calendar of events in the Housing Cooperative #1.

### **Multiple Mortgage Housing Co-operative Model**

In the multiple mortgage housing cooperative model the housing cooperative owns and maintains public areas like roads, recreation areas, playgrounds and other community infrastructure but members own their individual homes and land (Bunce, 2013).

The by-laws of the Housing Cooperative #1, #2, #3 and #4 regarding formation made it plain that the main goals for their establishment were land purchase and housing development. While the bylaws of the Housing Cooperative #6, #7 and #8 had land acquisition as a major goal.

This model utilized a financing strategy identical to the other two methods. The primary source of funding for the housing project was member contributions, and as evidenced by the members' passbooks from five Housing Cooperatives (#1, #2, #3, #4 and #6) financial institutions like Sacco's played a critical role in financing members. This sentiment was supported by the KIs from the Housing Cooperative #1 and was backed by seven KIs from different housing cooperatives that:

*Before the project began, members were asked to put down payment of the housing project, with the remaining balance to be paid during the construction phase. (KII, August 2018, Nairobi)*

From the quote above, it is clear that a lot of money is required to jump-start the housing project which might be not enough from member savings. This is the reason why the majority of the members seek financing from Saccos and other financial institutions. This argument was supported by the World Bank report (2017) which found that housing co-operatives in Kenya acted as a developer with projects ranging from 10 houses to several hundred with prices ranging from KSH 600,000 to KSH 14 million. Location and infrastructure were key determinants of cost.

In terms of management, the notable similarities to all three models are that members elect their leaders during the annual

general meeting as shown by their minutes' book from the nine Housing Cooperative (#1, #2, #3, #4, #5, #6, #7, #8 and #10). The regular meeting is held to discuss resident welfare and emerging issues which is rare for LHCM and CHCM. The monthly service charge book from Housing Cooperative #5 observed that each resident contributed 1000 Kenyan shillings to cater for repairs and other maintenance within the estate. It was observed that the social welfare book from Housing Cooperative #1 contained a number of the activities members were involved in such as wedding ceremonies, funeral arrangements, dowry, and fundraising for medical, school fees among others.

#### **Continuing Housing Co-operative Model**

In a continuous housing cooperative concept, members collectively control the land, dwellings, and common areas (Jimoh 2012). The housing cooperative's members who employ this approach have a tradition of saving money for real estate purchases. It is consistent with the cooperative model's goal of encouraging thrift among members by giving them a chance to save money (Magumula and Ndiege, 2019).

According to the bylaws of Housing Cooperative #4 which adopted this model indicated that the major goal of establishing a housing cooperative was to house the members and non-members. The Audit report revealed that the surplus earned during the year is shared amongst members on a pro-rata basis by their shareholdings. For instance, KIs from Housing Cooperative #4 said (and was supported by seven KI from other housing co-operatives) that:

*Our apartment host both members and non-members since some of our members*

*have homes elsewhere.* (KII, August 2018, Nairobi).

The KI demonstrated that their main objective of this model is to provide housing for both members and non-members. Most of these housing co-operatives are found in an urban setting where acute shortage of housing is the order of the day. This model has provided alternative provision of affordable housing particularly to town dwellers.

The finance model is similar to the other two models in that it relies mostly on member savings, but because of the huge sums needed to either build or purchase the building, they are compelled to seek financing from financial institutions. It was also discovered that the Housing Cooperative #4, member's passbook showed contributions towards apartment acquisition. The member is anticipated to receive more returns from investing more shares on the building. Unlike the other two types, members of this housing cooperative model hold shares rather than actual title for housing unit.

In terms of management, the housing cooperative hold annual general meeting to elect their leaders. The minute book from Housing Cooperative #3 and #4 indicate that the board of directors were in charge of collecting rent from their apartment on behalf of the members. The rent is determined by the market forces and not the members. Baiges *et al.*, (2019) found that monthly rent of housing co-operatives in Zurich was regulated and fixed according to the general costs of the housing project.

#### **Analysis of Housing Cooperative Models**

Strengths, Weakness, Opportunities and Threats (SWOT) is a simple, but powerful business planning tool. It can assist a co-operative to concentrate on what makes it

Table 2: SWOT analysis of housing cooperative models

	Strength	Weakness	Opportunities	Threats
<b>Limited housing cooperative model</b>	<ul style="list-style-type: none"> <li>• Easy to start the housing cooperative</li> <li>• Easy to find available land</li> <li>• Easy to mobilize resources</li> <li>• Relatively affordable</li> <li>• Scattered site/mixed income housing</li> </ul>	<ul style="list-style-type: none"> <li>• identification of land without Infrastructure</li> <li>• Lack of economic of scale in housing development</li> <li>• Poor connectivity of the social amenities</li> <li>• Long delay in housing development</li> <li>• Limited funding</li> <li>• No comprehensive housing plan</li> <li>• Lack of integrated affordable housing units</li> </ul>	<ul style="list-style-type: none"> <li>• Individual ownership of title deed</li> <li>• No restriction of expansion and redesigning</li> <li>• Incremental housing development</li> <li>• Appreciation of land value</li> <li>• Economic of scale in land acquisition</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of expertise in housing</li> <li>• Limited availability of technology</li> <li>• Difficult to achieve better quality (limited finances)</li> <li>• High security issues</li> <li>• Regulatory hurdles</li> <li>• Predatory lending</li> </ul>
<b>Multiple mortgage housing coop model</b>	<ul style="list-style-type: none"> <li>• Availability of infrastructure for housing development</li> <li>• Collaborate with Partners in raising capital</li> <li>• Collaborate with Partners to provide technologies</li> <li>• Economic of scale in housing development</li> <li>• Adequate social amenities</li> <li>• Housing development is less than 3years</li> </ul>	<ul style="list-style-type: none"> <li>• Collectively ownership of common facilities</li> <li>• High densely populated.</li> <li>• Compliance with the rule and regulation of the estate</li> <li>• Housing costs are high and continue to rise</li> <li>• There is a high shortage of affordable housing for low- and moderate-income families</li> </ul>	<ul style="list-style-type: none"> <li>• Integration of sustainable parameters in housing development</li> <li>• Strong market demand for housing</li> <li>• Focus on Efficiency &amp; Effectiveness</li> <li>• Focus on member Satisfaction.</li> <li>• Strong capital base</li> <li>• Skilled and professional management</li> <li>• Improved quality of life and dignity of residence</li> <li>• Better conditions for human development, employment and economic growth</li> </ul>	<ul style="list-style-type: none"> <li>• Restriction of expansion or changing or design</li> <li>• Insufficient, affordable and safe housing for all populations</li> <li>• Aging housing stock – maintenance and enforcement</li> <li>• Available vacant land</li> <li>• Conservative housing design</li> <li>• Aging infrastructure</li> <li>• Transportation access (housing-jobs)</li> </ul>

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<p><b>Continuing Housing coop model</b></p>	<ul style="list-style-type: none"> <li>• Adequate of financial resources</li> <li>• Better hygiene and sanitary conditions</li> <li>• More cohesive and socially inclusive urban growth</li> <li>• Contribution towards climate response and mitigation</li> <li>• Available housing choices, such as rental housing, and security of tenure</li> </ul>	<ul style="list-style-type: none"> <li>• Crime/public safety concerns</li> <li>• Abandoned/vacant property</li> <li>• Older housing stock</li> <li>• Insufficient/aging infrastructure in older communities (roads, sewers, water, utilities, transportation, etc.)</li> <li>• Changing demographics (e.g. population loss)</li> </ul>	<ul style="list-style-type: none"> <li>• High revenues collected</li> <li>• Appropriate location (near economic hubs)</li> <li>• They serve as residential and commercial purposes</li> <li>• High demand for both commercial and residential</li> <li>• No restriction or control on rent rates</li> <li>• Located in highly densely populated.</li> <li>• Invest in areas with minimal weaknesses</li> </ul>	<ul style="list-style-type: none"> <li>• Unstable rent prices / Fluctuations</li> <li>• Use of green space</li> <li>• Multiple county governments levy</li> <li>• Lack of social and transportation infrastructure.</li> <li>• High property taxes</li> </ul>
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strong, position a co-operative to reduce threats, and hopefully leverage unseen opportunities. The SWOT analysis was drawn from profiling of housing cooperative models which had seven parameters namely formation, ownership, financing, monthly costs, maintenance and repairs, membership formation and property management. Three models were identified from these parameters are: Limited Housing Co-operative Model, Multiple Mortgage Housing Co-operative Model, and Continuing Housing Co-operative Model. A SWOT analysis has been used by many scholars (see Jimoh and Van Wyk, 2014; Allegheny, 2005; Rajneesh and Mitashi, 2017).

#### **Limited Housing Cooperative Model**

The housing cooperatives adopted the model believe on empowering members through land acquisition. The model had high power of resource mobilization. In addition, the model showed high affinity to provide land to low and middle income members. Due to lack of infrastructure and other basic services, it becomes too expensive to build affordable housing where the housing cooperative had bought land. Also the majority of members find it impossible to build dwellings due to lack of access of credit from financial institutions. Members thus continue to live in rented housing for a considerable amount of time after purchasing a plot. They occasionally end up selling the land they had planned to build home.

With the exception of two KI from Housing Cooperative #7 and #8, it was noted that seven KIs from different housing cooperatives issued land title deeds to their members as proof of ownership of the plot of land. According to the World Economic Forum (2019) the major investment in housing development start with land. Such an

observation was corroborated by KI from Housing Cooperative #9, who stated:

*Construction of housing largely depends on the availability of land where the housing will be elected on. (KII, August 2018; Nairobi)*

The board of directors is in consultation with members acquire land where the members are willing and comfortable to reside. Many Kenyans desire to own a piece of land where they can build their own home while they are strong and not when retired. Rent payment after retirement is not a viable option.

#### **Multiple Mortgage Housing Cooperative Model**

The suitability of this model in addressing the housing shortage was examined by SWOT analysis. An internal memo from Housing Cooperative #1 in 2018 in Plains view Juja was used. It was observed that 78 units of three-bed room house were issued to the owners. It was noted that housing cooperatives bought the land and constructed the housing units in a gated community. This argument is in line with the sentiment by the KI from Housing Cooperative #1 and was supported by other KIs from Housing Cooperative #2, #3 and #5 explain that:

*Houses constructed through this model were averagely affordable because they were constructed in large scale with adequate infrastructure and social amenities. (KII, August 2018, Nairobi).*

The construction of housing units in the gated community contributed to the reduction of the total cost per unit and also enhanced the security amongst the residents. Location and infrastructure are the major determinants of affordable housing. Building housing on large scale reduces the overall costs of labour, material, and administration with a great margin.

However, the study found out that this model had some weaknesses and threats that made the model unpopular among the citizen. Member passbook from Housing Cooperative #1 observed that a huge amount of money ranging from 2 million to 5million was required for housing development. The majority of the members of housing co-operatives cannot afford this amount due to their low level of income. It was observed bylaws and regulations from Housing Cooperative #1, #2, #3, #4 and #5 prohibit any alteration or modification or extension of any kind to the existing housing units. This discourages many people who desire to make some adjustment in their housing unit.

#### **Continuing Housing Co-operative Model**

The suitability of the model in addressing the housing shortage was based on a SWOT analysis. The continuing housing co-operative model was designed to provide affordable housing for their members. This model has been modified to suit the Kenyan context by producing housing for both members and non-members. The two models were producing housing units for members but this model is producing housing units for the market which is good progress towards addressing the housing shortage in Kenya. Most of these housing co-operatives are based in an urban setting where an acute shortage of housing is dominant. The housing co-operative stabilize prices in the market which was previously dominated by private investors.

The housing co-operative adopting this model require huge sums of money to deliver the housing units. However, it is very difficult for housing co-operatives to get a mortgage from a financial institution for housing development because of stringent lending

conditions. Also, members of the housing co-operative might not have the requisite knowledge and skills to run this kind of housing co-operative hence they hire professionals to run the business on their behalf. Notably, the housing co-operative adopting this model had closed membership.

#### **CONCLUSION**

The limited housing co-operative model was mostly preferred by majority of the respondent of housing cooperatives in Nairobi City County which implied that majority of members of the housing cooperatives acquired the housing through this model. The biggest challenge of this model is lack of collective construction of housing and lack of infrastructure and other social amenities among others. Hence make this model not suitable to provide sufficient number of housing units for their members.

The multiple mortgage housing cooperative model is commonly used by salary people who are able to collectively finance their housing. The major advantage of this housing cooperative model is it constructs housing in large scale hence lowering the cost per member and the major challenge is how to finance the project up to the completion.

The continuing housing cooperative model refers to housing cooperative members collectively own the land, dwellings, and common areas. In this model the residents are expected to raise monthly contribution to cater for loan repayment, repairs and maintenance of the building. This model is relatively cheaper compared to other two model discussed in this paper. However, the biggest challenge to the model is that there is no individual ownership of the property that put off many people from investing this model. In conclusion, three models have

different test and preference according to the member specification.

### RECOMMENDATIONS

Therefore, the paper recommends for adoption of the multiple mortgage cooperative model, which accommodates diversity interests of various classes of people and provide sufficient sustainable affordable housing collectively. However, the ministry of finance needs to restructure housing finance system to accommodate the housing needs for the low- and middle-income households for the model to be sustainable.

The paper recommends to the state department of cooperative to ensure before registration of housing cooperative must be accompany by appropriate model selected for housing development. In addition, the housing cooperative should include housing cooperative model in their bylaws.

Also, the paper recommends to the ministry of finance to give special consideration to housing cooperatives in terms of accessing affordable housing finance from financial institutions. The paper recommends to the state department of cooperatives to regularly conduct the baseline survey to ascertain the status of housing cooperatives in terms of management of housing cooperatives, land owned by housing cooperatives, number of housing units produced and financing model for housing cooperative.

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