

Towards Appropriate Low-Cost Housing Designs for Co-Operative Core Housing in Nigeria: Options and Prospects

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Abstract

This paper addresses the formulation of appropriate architectural design solutions for the realization of the co-operative core housing delivery system in Nigeria. The process of actualization of this housing delivery system in Nigeria is anchored on the viable economic option of the institutional framework of co-operative societies. At the onset, it examines the nature and principles of co-operatives and proceeds to the elucidation of the concepts and beneficiaries of the co-operative Core Housing Programme. Furthermore, it advances to an elaboration of the mechanism of Co-operative Housing Societies in terms of its definition, functions and membership as an economic option for housing delivery in consonance with the socio-economic circumstances of the low and middle income classes in Nigeria. This paper then provides an insight into the process of conceptualization of appropriate low-cost housing designs for the Co-operative Core Housing in Nigeria which includes design constraints, cost - saving considerations and the actual design proposal of housetypes. In conclusion, it highlights the specific advantages of the Co-operative Core Housing Programme which includes accessibility to owner-occupier houses by the low and middle - income earners and as a panacea for the perennial and acute housing shortage in Nigeria.

INTRODUCTION

The economic viability of the co-operative housing delivery system, presently, deserves exploration especially in the current socio-economic circumstances of acute shortage of housing in Nigeria. Its economic relevance to the prevailing housing situation in Nigeria becomes very obvious in view of the principles, structure and operations of the co-operative organization. The myriad of problems of land, finance and escalating costs of building materials associated with the production of housing has posed enormous challenges to various levels of government in Nigeria.

Attempts by both the Federal and State Governments in the past two decades through various forms of housing polices to provide housing to their growing and teeming population obviously indicate appreciation of the problems in governmental circles. Considerable efforts have been made, for example, by Co-operative Building Societies in the Eastern part of Nigeria, like Enugu and Anambra States to enable members own their own houses. Although progress has been slow owing to lack of positive Government support and difficulty in land acquisition, these societies have assisted some of their members in building blocks of flats in Enugu and Onitsha. In reality, however, the achievements have glaringly fallen short of projections for reasons of either misconceptions or some other constraints.

THE NATURE OF CO-OPERATIVES

Co-operatives are voluntary self-help organizations set up to solve the common economic and social problems of their members. The international Co-operatives Alliance has defined a Co-operative Society as “An association of persons who voluntarily joined together to achieve a common end through the formation of a democratically-controlled organization, making equitable contributions to the capital required and accepting a fair share of the risks and benefits of the undertaking in which the members actively participate”. It is significant from the definition that co-operatives involve people, who have identified their common problems, which problems they decided to solve through co-operative action. In adopting the co-operative strategy, they have accepted their inability to solve their problems individually. This awareness is significant and ensures effective group cohesion and success. Loyalty and honesty are invaluable for the success of such a programme. There must also be full knowledge and understanding of the projects and programmes of the co-operative by the participating members.

CO-OPERATIVE PRINCIPLES

Co-operative principles are implicit in the definition of a co-operative society. There are distinguishing factors which make co-operatives distinct business organizations and different from other organizations.

The International Co-operative Alliance had in 1966 accepted six such principles. These are:

1. **Open and Voluntary Membership:**

A Co-operative is open to those who can make use of its facilities and membership is voluntary. No discrimination is exercised based on race, creed, sex or religion.

2. **Democratic Administration**

A co-operative is a democratic business organization. In the conduct of its affairs, all members have equal say

irrespective of status or shareholding. Supreme authority is vested in the general meeting, where each member is entitled to attend, vote or be voted for.

3. **Limited Interest on Capital**

Capital in the co-operative society is a very important factor of production. Its importance is however limited. Consequently, when profits are made in a Co-operative enterprise, they are not distributed solely on the amount of share held.

4. **Distribution of Surplus to the Members in proportion to their Transactions**

Co-operative business is essentially with the members. Profits are therefore referred to as surpluses. When surpluses are made, they are distributed to members based mainly on the amount of business done with the society.

5. **Co-operative Education**

Co-operatives attach great importance to education. Education ensures that members understand their society, and give it the required support in order to achieve success. Members are made aware of their rights and obligations towards their society.

6. **Co-operation among Co-operatives**

Co-operatives are established to bring benefits of scale to their members. Co-operatives should grow and develop both horizontally and vertically in order to further expand the benefits in the interest of the members.

THE CONCEPT OF THE CO-OPERATIVE CORE HOUSING PROGRAMME

In view of the apparent failure of the various housing programmes to achieve set targets, it has become necessary to find alternative solutions, one of which is the Co-operative Core Housing Concept.

This concept calls for the formation of groups of prospective home-owners into Co-operatives or Co-operative societies for the building of low-cost walk-up three to four storey apartment blocks as opposed to single storey housing development with its attendant urban sprawling problems. The aim is to satisfy the housing needs of both the low and middle income groups or earners through the erection of well-designed houses with modern sanitary conveniences at relatively low-cost. This implies that the houses are built as cheaply as possible but at reasonably good quality standard.

Additional conceptual basis for the advocacy for the widespread national use or application of the Co-operative Core Housing delivery system is evident in the enunciations of the 1991 National Housing Policy.

A cursory glance at its provisions for the Institutional Framework for Housing Delivery shows it urges each State Government as one of its functions to promote the formation of Housing Co-operatives.

The Government will initially bear the costs of site development and provision of infrastructural facilities. These costs would be passed on to home-owners in the neighbourhoods. The Co-operatives will obtain the mortgage loan under appropriate easy repayment and low interest terms. They will procure all materials, organize all work that can be done on self-help basis, and hire tradesmen and artisans as may be necessary to complete the core of the building, i.e. the shell including the staircases, the floors, the external walls, kitchen and toilet facilities. It is a form of phased development. Phase one, made up of the core, is jointly financed and constructed by each group of co-operators while the subsequent phases, made up of the internal room arrangements are undertaken by the individual co-operator if and when his or her earning capacity improves.

BENEFICIARIES OF THE CO-OPERATIVE CORE HOUSING PROGRAMME

The two classes of citizens being considered under the programme are the middle and low income groups, although members of the higher income group can participate if they so desire. For the purpose of this exercise, the low income group comprises people whose earnings fall between levels 01-06 while the middle income group comprises people whose earnings fall between 07-10.

Housing the low income group particularly those between 01-03 poses quite challenging problems. Their earning capacity is so low that they can hardly afford to repay the housing loan without a kind of special arrangement or government assistance. In spite of their limited income, however, they are prone to having the largest number of wives and children. Therefore to accommodate them conveniently, they need additional rooms, a minimum of three bedrooms perhaps. This situation creates a contradiction i.e. how to provide the large accommodation required at a cost commensurate with their earning capacity.

DEFINITION, FUNCTIONS AND MEMBERSHIP OF CO-OPERATIVE HOUSING SOCIETIES :

DEFINITION OF CO-OPERATIVE HOUSING SOCIETY:

Co-operative housing societies are co-operatives formed by consumers for the joint supply of housing. As builders, they set up housing space in single family or multiple family dwellings which they let out or sell to their members.

Compared with other types of co-operatives, the co-operative housing societies have to spend very large amounts of money for every one of their members they intend to serve because house-building requires large

investments in view of the long useful life of residential premises.

FUNCTIONS OF CO-OPERATIVE HOUSING SOCIETIES

- (a) They are devoted to securing housing for their members and act mainly as builders.
- (b) They buy real estate, plan and finance the building work, in short, do all the work involved in preparing and supervising the construction of housing.
- (c) Housing management is also part of the functions of co-operative housing societies.
- (d) Co-operative housing societies also care for other building projects, while they assist the individual owners in preparing and carrying out the building of their houses.
- (e) They also set up houses, mostly single-family houses, which are intended from the onset to be sold to members.

MEMBERSHIP OF CORE HOUSING CO-OPERATIVE

Membership of the core housing co-operative should consist of persons who are adults and fall within the definition of low and middle income groups. Such members must carefully select themselves. In each case, every member must be screened by others in order to ensure compatibility. Only persons of good character would be admitted. It is important to stress that as the families are to live together permanently, the need for great care in the selection process cannot be overemphasized. As the members are to benefit from loans made available to the group for the project, the need for their ability to repay the loans must be fully taken into account. Criteria like lifestyles and regular sources of earnings must be critically examined before a person is admitted into membership.

The Co-operative Societies Law has stipulated a minimum membership of ten for any co-operative society. Co-operative theory, however, advocates that “the greater the number, the lesser the task of meeting the needs of members”,. Consequently the membership should be as large as possible. In a Core Housing Co-operative, the size of the house will determine the number of persons who would belong to the society.

This legal stipulation on membership should guide the planners in determining the size of the houses.

In order to ensure the success of the programme, the following criteria are recommended for membership.

- Adults in regular employment
- Good character
- Ability and willingness to pay all dues.
- Willingness to live and work with others
- Assured tenure

MANAGEMENT OF THE SOCIETY

Individual persons join the Core Housing Co-operatives. Supreme Authority is vested in the general meeting of members, which takes all policy decisions. The general meeting annually elects an Executive Committee for the effective day-to-day management of the society. The committee includes a president, vice president, treasurer, secretary and a few other members. The committee exercises as much powers as have been delegated to it either by the byelaws or by resolution of the members.

As the society is invariably compact and with limited membership, there would be considerable advantage in most policy matters being fully handled by the General Meeting which should meet very regularly and, if need be, often. This will enlist the fullest involvement of the members. The committee of a core housing co-operative is likely to be made up of laymen. The technical details of house construction, supervision, etc., may be outside their competence. It becomes essential, therefore, that the committee should receive constantly, regular guidance and assistance from the experts. It is expected that such technical guidance would be provided by the Housing Corporation. Areas where such assistance might be given include designing, costing, supervision, construction, maintenance, etc. It is essential to note that while some payments might be made for design and supervision, the regular technical advice should be given to the societies at little or no cost.

RAISING OF FUNDS

A core housing co-operative is a self-help organization. It must, therefore, set the pace through raising own funds. The funds would provide the necessary anchor on which assistance would be attracted from outside. This initial manifestation of commitment is an essential prelude to co-operative action and distinguishes a serious group from others. It would be essential, however, that the size and cost of the building be very clearly established. This will assist the members to assess the level of contributions required of them for a take-off and also the likely size and period of repayment of the loan component.

In order to ensure an effective system of raising funds, the members of the core housing co-operative society would commence savings preferably, through checkoff system prior to the final decision on the project. The advantages of this approach are clear. In the first instance, the funds for the takeoff are raised. Secondly,

the members get used to the system which they would operate for a very long time. The running-in period would help to confirm the efforts earlier made at choosing participants, as likely defaulters are exposed early in the day.

It is recommended that such savings made by members would be paid into a savings account of the society until take-off has been fully planned.

ACQUISITION OF LOANS

As housing requires a lot of funds, which invariably must be outside the reach of the members, external funding would be required. Although the assistance of the Housing Corporation has been recommended, it is essential that the Corporation acts like technical adviser and promoter rather than being a channel for the loans. In this connection, when the technical details are right, a society should be recommended to a commercial bank or Mortgage bank for funding. The society's corporate status together with the mortgage on the property should be sufficient security for the loan. If, however, the banks are not forthcoming, government guarantee might be obtained. Bonds may also be floated by the state government for the provision of the necessary funds for funding the core housing scheme.

ADMINISTRATION OF FUNDS

The committee elected by the members would have direct responsibility for the administration of the funds. The committee must, however, regularly and promptly report to the general meeting. In addition to ensuring the regular and full information to members, such regular reports are consistent with accountability.

The involvement of the technical advisers – the Housing Corporation would be necessary for the guidance of the members in order to ensure effective utilization of funds.

ALLOCATION OF APARTMENTS

One of the possible areas of difficulty may be the question of allocation of apartments. Some, if given a choice, might prefer some particular apartments. In order to avoid any unnecessary issues and distractions, every member on joining would accept to live in an apartment or flat that falls to his lot. Necessary ballots supervised by outside bodies like the Co-operative Division, Housing Corporation, etc. would help in ensuring fair allocation. It is essential that the balloting be completed and settled before the construction commences. This would provide the necessary chance to nip any attendant problems in the bud.

REPAYMENT OF LOANS

As soon as the house is erected and the members take possession, they would commence the repayment of the loan. It is necessary that they are involved in all the details of the arrangements. If this happens, the progress of the work as well as the final cost of the project would be well known to all the members. This will obviate the kind of problem which arose when farm settlers were asked to move into villages only to be informed of the cost of the houses later, which costs they regarded as exorbitant.

If the members raise the take-off funds, and on check-off system, they would have got used to the deduction from their pay. Such deductions would be related to the amount of repayment computed for them.

BYELAWS OF CO-OPERATIVE CORE HOUSING SCHEME:

Co-operative societies are registered corporate organizations. In Enugu and Anambra States, they are registered under Co-operatives Societies Law Cap. 28 of Revised Laws of Eastern Nigeria 1963. Each Co-operative Society is empowered to make its byelaws. Such byelaws are also registered by the Chief Registrar of Co-operative Societies. The byelaws provide the necessary regulations for the conduct of the affairs of the society. Sec II (2) and II (3) of the Co-operative Societies Laws and Rules specified the matters in respect of which byelaws shall be made. That notwithstanding, it is very essential that the byelaws should spell out the various provisions as would ensure the success of the society. Legal experts should be involved in the drafting of suitable byelaws for the core housing co-operative.

Special provisions are recommended for the following areas:

- (i) The full qualification for membership as recommended earlier.
- (ii) The terms of replacement of a member, when the need arises.
- (iii) The system of disposal of apartment and transfer of ownership.
- (iv) Where possible, a system of payment of dues through automatic deduction from salaries.
- (v) Relationship with similar co-operatives and establishment of common services as would facilitate the operations of core housing co-operative.

SUPERVISION OF CO-OPERATIVE CORE HOUSING SOCIETY

As a co-operative society, the co-operative core housing society would be registered by the Chief Registrar of Co-operative Societies. Additionally, the staff of the Co-operative Division would assist the society to set up a

suitable accounting system and ensure that such accounts are regularly checked and audited once a year. The Co-operative Division would provide all advice on Co-operative matters and co-operate with other technical advisers to ensure that the Co-operative Core Housing Societies achieve their objectives.

CO-OPERATION AMONG CO-OPERATIVES

It is very necessary that Core Housing Co-operative Societies in each layout co-operate with one another. These Societies could co-operate in the areas of bulk purchase of building materials and the provision of amenities and common services for the neighbourhood. This is consistent with the Co-operative Principle of Co-operation among Co-operatives.

DESIGN CONSTRAINTS

The prime consideration in the concept of the Co-operative Core Housing is cost-reduction. The emphasis is on making the initial cost of the core as minimal as possible so as to make housing available to the home-owner at a price he can afford. As desirable as this is, the implications of a walk-up three to four storey apartment block have limitations in cost-reduction. Standards require at least one main staircase and an escape staircase to each or groups of apartment blocks. The fact that internal walls will be built by the home-owner at his time and convenience necessitates the use of a framed building construction, on columns and beams which invariably tend to increase costs.

Also the major and cost intensive elements of the building, i.e the staircase, the columns, beams and floor slabs, as well as the external walls, windows, plumbing installations and roof make up the core. For the programme to achieve the desired results, the initial cost of the development of the core should be as low as possible. The design should, therefore, aim at achieving this objective.

DESIGN AND COST-SAVING CONSIDERATIONS

As the home-owners are expected not only to finance through some kind of loan arrangement but also participate in the construction of their houses, the designs should reflect and exploit the special condition of self-help such as the building method to be adopted. Very simple and unsophisticated building systems as well as the use of locally available materials and components become a priority.

The design should as much as possible minimise the use of both internal and external columns by adopting spans that can be conveniently taken up by load-bearing walls. Without comprising on standards, such elements of the building like staircases attracting high cost could be reduced in number by conveniently locating them to serve groups of buildings.

The core of the building will be jointly completed by the co-operators with finishes restricted only to common circulations areas and external surfaces, while internal finishes including floors, walls and ceiling, etc, are to be undertaken by each home-owner.

NEIGHBOURHOOD PLANNING

The Co-operative Core Housing Concept envisages that Co-operative buildings will be located on individual plots with the co-operatives having right of occupancy. The social integration of the various income groups will, therefore, be reflected in the neighbourhood planning showing a good mixture of the low, middle and high-income groups. The heights of the blocks are to be varied to relieve the neighbourhood of monotony.

DESIGN PROPOSALS

Housing invariably implies that there must be certain minimum space requirements necessary for a decent standard of living by a family. The basic space requirements for a family would comprise one bedroom (preferably two), one living room, a store, one kitchen, a shower, one toilet (wc) and a terrace space. These are appropriate minimum requirements or standards.

A study of the income levels and existing housing standards show that the majority of people in the low income group live in buildings with facilities far below the minimum occupancy standards, while some of those in the middle income group are in fact not better in terms of accommodation.

This rather ugly situation is as a result of the inability of the people to afford to pay for a reasonable accommodation. It is in realization of this situation that a proposal is being made for four house types, two each for both the low and middle-income groups. This typology of house types will ensure housing affordability for these income groups.

HOUSE TYPE 1: APPENDIX 1

This is designed to serve the upper segment of the middle-income group (i.e levels 9-10). It consists of (3-4 floors) block of flats at 2 flats per floor. The flats are jointly served by one internal and one external staircase. Facilities provided include, a terrace, living/dining room, store, kitchen, shower, toilet and 3 No. bedrooms.

These room spaces meet the minimum space requirements. The maximum span is 4.5m thus making it possible to minimise the use of highly reinforced concrete columns both internally and along external walls. The design is quite simple and straightforward thus making construction technique easy. Proper orientation of building is taken care of, while the entire room spaces are well-ventilated.

The design makes provision for adjustment by the Co-operators. Where for reasons of the realities of the economic situation, the scope of the building needs to be reduced, it will be quite easy to omit the end bedroom without adversely affecting any aspect of the design or construction method. Drawing (Dwg. No 1) shows the floor plan as fully developed while drawing (Dwg. No 2) shows the floor plan development of the core only. The total area per flat excluding the two staircases but including the terrace is 115.10m².

HOUSE TYPE 2: APPENDIX 2

This is designed to serve the lower segment of the middle income group (i.e level 07 and 8). The philosophy of the design is the same as per house type 1. The difference is that this has two bedrooms. Also the design makes easy provision for adjustment by the Co-operators by reducing the scope if it become absolutely necessary. The total floor area per flat excluding the two staircase is 96.98m².

HOUSE TYPE 3: APPENDICES 3 AND 4

This is design to serve the upper segment of the low income group (i.e levels 04-06). In view of the earning capacity of this group and the poor occupancy standards of where they presently live, it is considered that a well-organized, although minimum requirements will be adequate to cater for the needs of the home-owner. Also adequate care has been taken of the realization that the majority of this group of Co-operators are not familiar with the medium density living of the system being proposed. This is achieved by the simple arrangement of the room spaces and circulation, which are not drastically far from what they are used to.

It consists of a walk-up (3-4 floors) blocks in groups of four with courtyards to enhance the quality of the immediate environment. The four blocks are jointly served by one central staircase while two other escape staircases serve groups of two blocks each. The rationale behind this, among other things is to reduce the number of staircases, which ordinarily would have been four in number. Facilities provided include, a living room, 2N0. bedrooms, kitchen, store, shower and toilet (wc). These room spaces meet the minimum space requirements. The merit in using the minimum space standards is to achieve cost- reduction. The maximum span is also 4.5m, thus making it possible to minimise the use of highly reinforced concrete columns. The design is as straightforward in form as it is simple in construction method. It, therefore, reflects the special conditions of self-help and does not require the services of a contractor. The room spaced are adequately ventilated while proper orientation of all the blocks is satisfactorily achieved. Drawing (NO 5) shows the floor plan as fully developed while (Dwg. N0 6) shows the plan of the core development only. The total floor area per family dwelling excluding the staircases and external walkways is 81.47m².

HOUSETYPE 4: APPENDICES 5 AND 6

This housetype is designed to serve the lower segment of the low income group (i.e. levels 01-03). In view of the economic disadvantage of this group, the rational consideration would be to provide them with only one bedroom. Paradoxically, however, this group tends to have the largest family size. A compromise solution is to give each family two bedrooms while two families share toilet and kitchen facilities in common. The philosophy of this design is the same as per housetype3. The facilitates are the same except that two families share toilet and kitchen units. The total floor area per family including half of the common facilities but excluding the staircases and external walkways is 73.88m²

LANDSCAPING

The quality of a block or groups of blocks and their immediate environment will be enhanced by good landscaping to complement the general landscaping of the neighbourhood.

CONCLUSIONS

From the foregoing elaboration of the mechanisms of the co-operative core housing society and the associated cost-saving design considerations, it is obviously the most suitable economic option as a housing delivery system in consonance with the present socio-economic circumstances of the low and middle income classes in Nigeria.

No doubt, the outlined modalities for the establishment of the Co-operative Core Housing is one of the best solutions to the problem of acute shortage of housing in the urban and rural areas in Nigeria, as it will make possible the construction of owner-occupier houses for the low and middle income earners.

The prospects of the co-operative core housing system lies in the improvement of housing affordability for both the low and middle income earners. Thus the dilemma of acute shortage of housing vis-à-vis housing demand in Nigeria can be mitigated through the economic viability of the co-operative core housing approach.

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