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### RESEARCH ARTICLE

#### WHAT ECONOMIC MODEL SHOULD FUND THE PRODUCTION AND MANAGEMENT OF SOCIAL HOUSING IN DEVELOPING COUNTRIES? SOME EXAMPLES

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#### Abstract

This paper discusses the concepts of standard of living, modest incomes and suggests the methods of calculating their values. Stakeholders involved in the production and management of social housing are identified and their roles within the sector are defined. The two economic models that can be used for the production and management of social housing are also presented and it can be seen that, while one of the models is based solely on bank loans, the other relies mainly on public funding. For its implementation, the bank lending business model requires the existence of a strong financial market that underpins a network of successful banking institutions. While this is true in most industrialized countries, this is not the case in developing countries where this network of institutions is embryonic or non-existent. The second economic model, based on public funding alone, appears to be a reliable alternative for producing and managing social housing in developing countries. However, an economic crisis materialized by the scarcity of public financial resources could lead to a deadlock in the functioning of this model. A careful examination of the economic models for financing the production and management of social housing that have been implemented in the world, presents at least three (03) realities: First, (i) Cameroon chose the economic model based solely on public financing; second, (ii) some countries in Europe have opted either for the economic model based on bank loans or the one based on public financing; and finally, (iii) a third group of countries that have opted for a hybrid economic model based on a mixture of bank loans and partial or total use of public financing.

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#### Introduction:-

The construction and urban development sector, which in 2010 accounted for 6.5% of the Gross Domestic Product (GDP), is one of the most important backbones of the Cameroonian economy because it creates wealth and employment, mobilises household savings and boosts the construction materials and manufacturing industries.

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The 2005 general population census (BUCREP 2005a, 2005b) reported that Cameroon had a population of 14 463 839, resulting in an average population density of 41.8 per km<sup>2</sup> at the time. Moreover, the projections made by the INS (2018) showed that by 2020 this population, around 24,910,305 inhabitants, had reached a population density of 52.0 inhabitants per km<sup>2</sup>. To this general demographic growth must be added the very high rate of urbanisation, which was 37.8% in 1986, then 45.8% in 2010, and, according to projections by researchers, will have reached 60% by 2020.

Today, according to estimates, while more than half of the population lives in urban areas, the cities of Yaounde and Douala alone concentrate more than 40% of the population (Batoure B. et al, 2017).

The mismatch between economic growth, population growth and rising per capita results in:

1. The displacement of people from rural areas to cities that are poles of economic growth.
2. The lack of financial resources and technical means to meet the housing demand of the population in both urban and rural areas.

Precarious housing such as slums are observed in the outskirts of cities as a result of the economic status of part of the population in urban areas and emigrants from rural areas who cannot afford decent housing. The rapid expansion of these slums in developing countries, is in fact an appropriate response to demographic pressure and housing shortages (Nonjon A., 2017).

This demographic growth, which is constantly evolving in many of our urban centers and in developing regions, leads to intensive urban sprawl, which consumes natural space and weighs heavily on its ecological capital. This triggers a need for construction, rehabilitation and renovation of infrastructure, buildings and urban development. Meeting these needs in the context of sustainable development by public authorities requires that complex social, economic and environmental challenges be addressed. It should be noted that the lack of housing, poor living conditions in one's home or a too demanding financial effort for housing contribute to widening inequalities and promoting the marginalization of the most vulnerable or fragile populations, which in the long term could lead to social disorganization and the destabilization of a nation.

In this paper, we propose to address one of the social challenges, which aims at housing low- income households. To this end, our analysis will be structured around the following points:

1. Clarify the concepts of standard of living and low income.
2. Identify the stakeholders involved in housing production.
3. Identify the different costs (or expense items) that a home generates throughout its life cycle.
4. Present a reliable economic model for financing the production and management of social housing in developing countries.
5. And see how this model has been implemented in some European countries and in Cameroon.

### **Income concepts**

An income is a flow of wealth expressed in currency, made available to an individual or household and a part of which is used to save, rent a home and consume. There are two types of income: Primary Income (PI) and Transfer Income (TI).

The above incomes are generally used to calculate the Standard of Living (SL) and Low Income (LI) of households

### **Primary Income (PI)**

Primary income is income directly related to the participation of individuals or households in the production process. These revenues include:

1. Labor income (wages).
2. Income from assets that are related to the ownership of real estate or a financial asset.
3. Mixed income from assets or labor.

### **Transfer Income (TI)**

Transfer (or secondary) income is income derived from family aids, redistribution operations carried out by public or local authorities (family benefits, social security benefits, allowances, retirement pensions, etc.).

**Disposable Income (DI)**

The disposable income for an individual or a household given by the relation (1), is equal to the sum of primary and transfers from which Direct Taxes (ID) must be deducted. These taxes are compulsory levies made up of taxes and actual social contributions received by public administrations.

In theory, disposable income (Blasco J. et al. 2018) for an individual or a household, according to the diagram in Figure 1, should allow any worker to house, consume and if possible, save.

$$DI = PI + TR - DT \tag{1}$$

Where:

QDI: Disposable income;

PI (TR): Primary income (transfer income or revenue);

DT: Direct taxes.

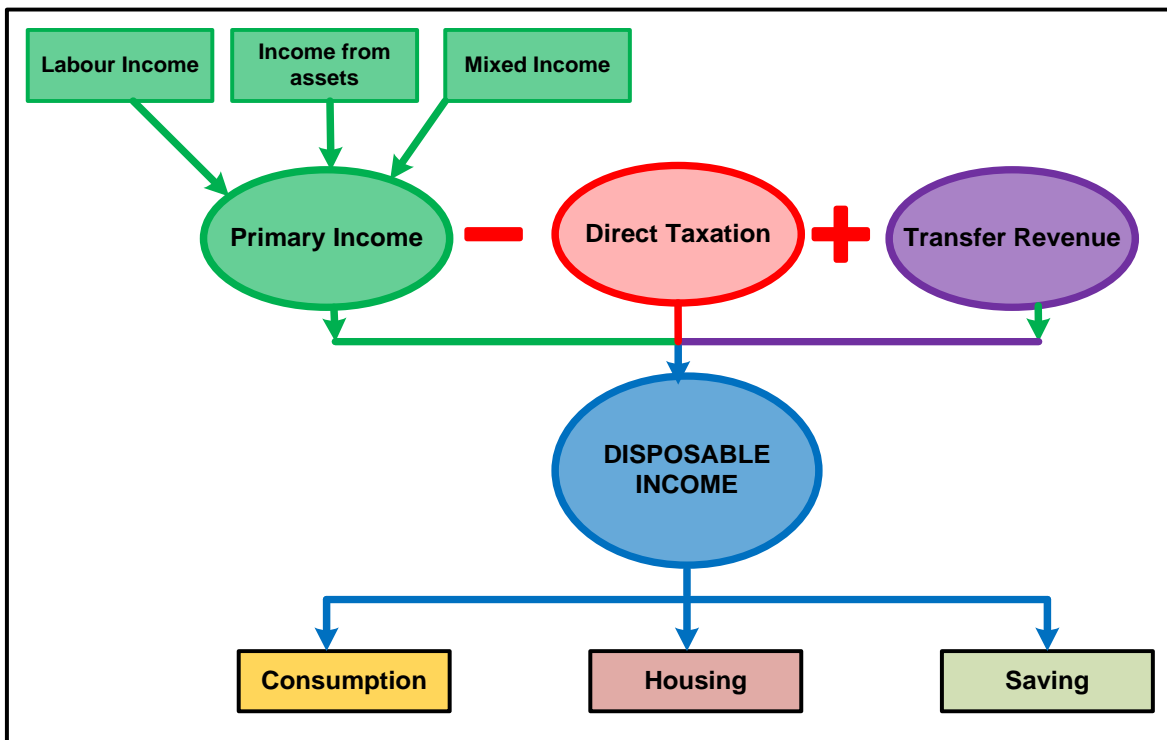


Figure 1:- Disposableincome (Blasco J. et al. 2018).

Intuitively, there are people or households with low income who can neither save, nor house or feed themselves adequately. The analysis in Figure 1 shows that these are in fact some people whose primary income is either zero (unemployed, students, ...) or equal to the income from modest labor compared to the number of people (Table 1).

Table 1:- Low income by family category in France (Blasco J. al. 2018).

Low-income Family	Minimum Disposable LowIncome (€)	Maximum Disposable LowIncome (€)
Alonewithout children	960	1240
Alone with a child	997	1612
Couple without children	1475	2363
Couple with one child	1763	2880
Couple with two children	1930	3190
Couple with three children	1980	3330

**The Concept of a Household’s Standard of Living**

The standard of living of a household is equal to the disposable income divided by the number of consumption units. In other words, the standard of living is therefore the same for all individuals in the same household (INSEE 2021).

In fact, the Consumption Units (CU) are calculated according to the modified OECD (Organization for Economic Co-operation and Development) equivalence scale, which assigns 1 CU to the first adult in the household, 0.5 CU to the other persons aged 14 or above and, finally, 0.3 CU to children under 14. If a household with Disposable Income (DI) consists of a couple, "n<sub>1</sub>" children aged 14 or above and "n<sub>2</sub>" children under 14, the standard of living (SL) of this household is given by relation (2) and Table 2 (Martin H., 2017), gives us the income of modest French households with the same standard of living.

$$SL = \frac{DI}{\left(1 + 0,5 \sum_{j_1=1}^{n_1+1} j_1 + 0,3 \sum_{j_2=1}^{n_2} j_2\right)} \tag{2}$$

Where:

j<sub>1</sub> : is the number of □ n<sub>1</sub> □ Children aged 14 and above

j<sub>2</sub> : is the number of □ n<sub>2</sub> □ Children under 14

Assuming that this household consists of only one adult, relationship (2) reduces to equation (3).

$$SL = DI \tag{3}$$

**Tableau 2:-** Incomes of modest households with the same standard of living: the case of France (Martin H., 2017).

Low-incomefamily	Minimum disposable income (€)	Maximum disposable income (€)	Numbers of consumptionunits	Minimum standard of living (€)	Maximum standard of living (€)
Alone withoutchildren	960	1240	1	960	1240
Alone with one (01) child less than 14 years old.	1248	1 612	1,3	960	1240
Alone with two (02) children less than 14 years old.	1536	1 984	1,6	960	1240
Childless couple	1 440	1860	1,5	960	1240
Couple with one (01) child less than 14 years of age.	1728	2232	1,8	960	1240
Couple with two (02) children less than 14 years of age.	2 016	2 604	2.1	960	1240
Couple with three (03) children less than 14 years of age.	2 304	2 976	2,4	960	1240

**The Concept of Low Household Income**

It should be noted that the notion of low income depends on several factors: the composition of the household (single person or couple with or without children), the level of economic development of the country and of the region where this household lives. For the sake of clarity, we will admit, like the “Institut Nationale de la Statistique et des Études Économiques” (INSEE) in France, that a low income stands between 60% and 90% of the median income. Based on this method, we propose in Table 3 the minimum and maximum low-income values for the different countries, calculate from the median incomes given by the website Contryeconomie.com (2022). A close look at this table shows that, globally, households in African countries have the lowest incomes.

**Table 3:-** Modest, median, minimum, maximum income for different countries.

Country	MedianIncome (\$) *	INSEE Minimum modestincome	INSEE maximum modest income	Minimum wage in dollars (\$) *
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		(\$)	(\$)	
Canada	3 864,00	2 318,40	3 477,60	1386,30
USA	5 258,40	3 155,04	4 732,56	1074,10
Suisse	7 125,00	4 275,00	6 412,50	3035,04
Luxembourg	6 159,20	3 695,52	5 543,28	4416,24
Brazil	761,00	456,60	684,90	231,40
Mexico	402,97	241,78	362,67	139,00
Chili	607,00	364,20	546,30	400,00
Saoudi Arabia	1 904,00	1 142,40	1 713,60	518,63
France	3 533,30	2 119,98	3 179,97	1328,72
Germany	4 043,00	2 425,80	3 638,70	1354,70
Belgium	3 945,80	2 367,48	3 551,22	1362,40
United Kingdom	3 531,00	2 118,60	3 177,90	1234,80
Italy	2 871,70	1 723,02	2 584,53	1923,93
Portugal	998,00	598,80	898,20	663,10
Spain	2 532,50	1 519,50	2 279,25	947,00
Russia	938,00	562,80	844,20	173,40
India	371,85	223,11	334,67	41,200
China	1 025,00	615,00	922,50	281,3
Pakistan	149,80	89,88	134,82	110,20
<b>Cameroon</b>	<b>125,00</b>	<b>75,00</b>	<b>112,50</b>	<b>66,00</b>
Central African Republic	43,00	25,80	38,70	64,17
Chad	58,00	34,80	52,20	110,00
Democratic Republic of Congo	43,00	25,80	38,70	91,00
Congo-Brazzaville	146,00	87,60	131,40	91,67
Gabon	601,00	360,60	540,90	275,00
Equatorial Guinea	538,00	322,80	484,20	228,15
Guinea Conakry	79,00	47,40	71,10	46,30
Angola	254,00	152,40	228,60	82,50
Republic of South Africa	503,00	301,80	452,70	181,71
Nigeria	169,00	101,40	152,10	75,13
Mali	73,00	43,80	65,70	73,34
Senegal	121,00	72,60	108,90	107,00
Niger	47,00	28,20	42,30	55,10
Tunisia	251,04	150,62	225,94	114,20
Algeria	205,00	123,00	184,50	200,10
Egypt	224,00	134,40	201,60	131,00
Togo	58,00	34,80	52,20	66,00
Rwanda	68,00	40,80	61,20	46,00
Burundi	23,00	13,80	20,70	22,70
Ivory Coast	191,00	114,60	171,90	110,00
Madagascar	43,00	25,80	38,70	29,00
Morocco	396,05	237,63	356,44	294,10
Ethiopia	71,00	42,60	63,90	26,00
Netherlands	4 433,00	2 659,80	3 989,70	1453,85

\*Contryeconomie.com « national minimum wage »

**Actors in housing production**

Housing is a building constructed for the purpose of housing one or more persons. The stakeholders mobilized to produce housing are identical to those used for the construction of buildings. On the basis of a criterion based on the role they can play in the production and management of housing; these actors can be classified into six (06) main categories as follows:

1. Public authorities.
2. Financiers.
3. Donors.
4. Occupants or tenants.
5. Insurers.
6. Subcontractors.

**Public Authorities**

The public authorities (or the State) contribute to the establishment of a legislative and regulatory framework for the activities of all actors in the sector. They ensure good governance and have the role of controlling and settling conflicts that may exist between the different actors. Under certain conditions, they can subsidize or provide assistance to beneficiaries.

**Financiers**

Financiers are legal entities involved in the funding of housing production activities; there are four (04) of them:

1. Commercial banks offering mortgages to landlords.
2. Public or private companies helping through subsidized loans or grants financed by contributions on the salaries of their employees.
3. Donors who mobilize their own funds for the construction of new housing.
4. Public authorities and communities, working at two levels to support:

**Social Investors projects;** by offering them implicit aids (public guarantees, exemptions from taxes, land contributions at a reduced price or by setting up a system of emphyteutic land leases, etc.) or explicit aid (direct grants, public loans, etc.);

**Occupants or tenants** (consisting of persons or households) on low income or ailing. To this end, the State and local authorities offer assistance in the form of: family allowances, housing allowance, active solidarity income, guarantees against unpaid rent, assistance with water and energy consumption, etc.

**Donors**

A donor here is considered to be a legal or natural person, owner who puts his property at the disposal of a tenant in accordance with the lease agreement signed by the latter, in return for the payment of rent. In the area of housing, there are two categories of lessors:

1. Private donors.
2. Social donors.

**Private lessors** are also natural or legal persons of the private sector, who carry out profit-making activities in the housing sector. The justification for the activities of these private companies lies in the volume of profits made and it is in all logic that they are interested in the management of high-end housing to attract a clientele consisting of wealthy or rich households.

**Social lessors** are non-profit social housing management organizations that are only interested in low-income households or ailing people. To be able to offer low rents to their clients, they must logically benefit from subsidies and aids from public authorities.

As part of their activities, both categories of lessors collect rents, do maintenance and rehabilitation work on their housing stock, and build new housing to develop their stock. Some of their activities require the use of specialized companies or subcontractors.

**Subcontractors**

The subcontractors are mainly made up of private companies used for the construction of new housing or the performance of maintenance work; they are paid by the lessors. For this subcontracting, we can mention: Building and Public Works companies for the construction, maintenance and renovation of dwellings; cooling, heating and air conditioning companies; various network companies (electricity, low voltage, etc.); companies in charge of the collection and treatment of domestic waste.

**The occupants**

The occupants or tenants are individuals or households with high, low or modest incomes or people in distress who, against part of the occupied housing, pay rent to the landlord.

**The Insurers**

The insurers, who are paid by the insured, intervene to cover the damage that could affect the property of the insured. We should note that all the stakeholders in the housing production and management chain are concerned by this insurance.

We should note that lessors and all subcontracting actors intervene throughout the life cycle of a dwelling, generating outgoing financial flows (costs) and or incoming (revenues) the entire time.

**The Various Costs of producing and managing housing**

The life cycle of a dwelling consists of several phases: construction, operation (throughout the life cycle) and demolition at the end of its life. Careful analysis of the whole life cycle allows us to identify the following types of costs:

1. Costs related to the amortization of debts incurred for the construction of the dwelling (land acquisition costs and housing construction).
2. Management costs.
3. Maintenance costs.
4. Operating costs (one part is supported by the lessor and the other by the lessee).
5. Demolition costs.

We should remember that all the above-mentioned costs are the responsibility of the lessor, except for a part of certain operating costs that are the responsibility of the occupant (consumption of water, electricity, gas, etc.). We should also note that, in developing countries, land acquisition costs are higher the more the construction site has all the urban infrastructure (Mindcafé, 2018). Given that the cumulative sum of the above costs can be high, what economic model can a social lessor in a developing country rely on to offer the lowest rents to a low-income clientele?

**Economic models for housing production and management**

According to Blasco J. et al (2013), there are two economic models that can be used for the production and management of housing; the economic model based on bank loans and the one based exclusively on public funding.

**Business model based on bank loans**

This model is used by private lenders, who place their shares in short-term or day-to-day financial market horizons. It operates mainly thanks to the loans contracted on the private markets, the commercial bank network and supplemented by the contribution of their own funds. The players in the real estate rental market (private lessors) finance their investments by the leverage of the indebtedness on the anticipation of future rents and capital gains from sales, that they incorporate into the equity capital from which they expect financial profitability. However, the expectation of these capital gains can be supported by the upward trend in real estate prices, which in the long run can put in jeopardy, the financial arrangement ipso facto leading to the bankruptcy of the investor operator.

For this model based on bank loans to work, it must have a very strong financial market and a strong network of commercial banks in some developed countries. Because of the previous condition, this economic model cannot be implemented in developing countries where the standard of living is very low and the banking sector and financial markets are embryonic or non-existent. Moreover, if this model is certainly profitable for high-standard housing offered to a wealthy clientele, it is hardly usable in its current state to fund the production and management of social housing in developing countries.

Based on the fact that social housing is housing intended, as a result of a public or private initiative, for people and households on low-income or in distress, who would have a hard time finding accommodation on the private market. To be able to house this low-income clientele, it is essential to rely on an economic model that is fair to all the actors involved in the production and management of social housing and that is essentially based on public funding.

### **The economic model based on public funding**

This economic model, which is essentially based on public funding (Hoorens D., 2013), is economically and technically the most reliable for developing countries as it relies on a system where:

1. The production function of social housing is not detached from rental management (the social lessor is both the contracting authority for the construction of the buildings and the manager of the rents given by the future occupants of these buildings). The reason for the generalization of this system is quite simple: the reimbursement of the investment, the payment of the management and maintenance costs being done on the basis of rental income, organizations will naturally be interested in producing quality housing adapted to the demand, as soon as they can ensure the rental management in the very long term. They will therefore be highly motivated to integrate, from the design stage, materials and equipment which minimize the costs of maintenance, operation and deconstruction;
2. The missions of social lessors (or social housing management bodies) are: the construction, development, allocation and management of social housing in order to improve the living conditions of people of modest or disadvantaged resources.
3. The financing plan in this model, in accordance with the tasks assigned to social lessors, requires that a **financial balance be achieved over a period of 30 to 40 years** for a social housing production operation. This condition of financial equilibrium over a long period demands that the financing methods of the economic model set up must be based on a system where:
  1. Financial balance (economic and technical vision) is achieved in the very long term;
  2. There are no profits to be distributed;
  3. Rents are linked to production costs;
  4. The financing of the housing production programme uses the leverage of debt from an original circuit;
  5. There are public subsidies for the various players in the sector.

### **Long-term financial balance**

Unlike private lenders who place their shares in short-term or day-to-day horizons for the financial markets, the actors of social housing production, in order to consolidate the specificity of their non-profit economic model, based on the placement of their shares in a long-time horizon, must verify and ensure that:

1. The rental management of a social housing scheme is designed for operation over a very long period of time;
2. Economic balance is reached after about forty years and with an operating period that is always longer than that of financial balance;
3. The social dimension is taken into account at the level of housing by the conditions of access imposed by the public authorities and the ceiling on rents is acquired on in a sustainable way.

In a distant future, the financial (or economic) balance, which is the fundamental characteristic of this economic model of production and management of social housing, imposes that its financing will necessarily be based on very long-term loans and commitments guaranteed by the State and varying between very low and zero interest rates.

This long-term vision requires that social housing management bodies have unquestionable financial strength and technical capabilities.

### **Technical capabilities**

The technical capabilities of the organization are used to design, build, maintain and rehabilitate its assets (integrating from the design stage the elements that minimize the costs of maintenance, operation and deconstruction) in order to: guarantee the reliability of its activities and maintain the housing at an acceptable level of service for the duration of its operation.

### **Financial strength**

Financial soundness means that the social housing management body as a result of its financial resources, will be able to carry out a sustained maintenance policy and to face economic hazards alongside tenants. Indeed, over a period of 50 or 60 years, one can expect to face eight (08) cycles of economic crises (Blasco J. et al. 2013).



### The Absence of Distributed Profits

In this economic model, the management of social housing generates positive results as soon as the construction loan is amortized (at the break-even period). Beyond this break-even period, the positive results obtained are not the object of dividend distribution, but contribute to the financing of expenses for the preservation of the real estate stock (rehabilitation and maintenance) and for development through the construction of new housing. This so-called self-financing appropriation is not only a means of sustainable self-development, but also a sign of the productivity of public funds committed to the initial financing of the project. It is also a sign of solidarity between tenants: the rents of current tenants partly finance the housing of future tenants.

### Rents Related to Production Costs

In social housing, the future revenues in the long-term break-even plan (about 40 years) are mainly made up of rents. The resulting level of rent is called the break-even rent, which guarantees the financial balance of the housing production operation. This is achieved by providing a sufficient level of revenue to finance the costs of maintenance, operation borne by the social lessor, management and amortization of the debts contracted for its construction.

To be more precise, the Equilibrium Rent ( $L_{EQ}$ ) will therefore depend on the costs incurred by the Social Lessor (§4). This equilibrium rent, given by relation (4), is an increasing function of the cost variables and the period of financial equilibrium  $T_{recup}$ .

$$L_{EQ} = g(C_{dette}, C_{terrain}, C_{gestion}, C_{entr.}, C_{exploit}, C_{démol}; T_{recup}) \quad (4)$$

Where:

$C_{dette}$  = Costs related to the amortization of debts contracted for the

construction;

$C_{terrain}$  = Land acquisition costs for the construction of the housing;

$C_{gestion}$  = Management costs

$C_{entr.}$  = Maintenance costs;

$C_{exploit}$  = Operating costs borne by the social landlord;

$C_{démol}$  = Demolition costs.

$T_{recup}$  = The period when financial equilibrium is achieved,

(30 ans  $\leq T_{recup} \leq$  40 ans).

We notice thanks to relation (4), that this equilibrium rent is not linked to the income of the tenants, it is the same for an equal dwelling whatever the income of the tenants as long as he respects the rules of entry in the said dwelling. This practice brings visibility to future revenues for the management bodies, which, apart from unpaid rent and vacancies, are not affected by the drop in tenants' income.

Given that in this economic model, the time of financial equilibrium  $T_{recup}$  is known and as the equilibrium rent is an increasing function of the cost variables, the ultimate objective of social landlords is to minimize all the costs they incur, in order to reduce the production costs of new dwellings and to offer very low rents to low-income households.

As regards the costs of maintenance ( $C_{entr.}$ ), operation (supported by the social landlord ( $C_{exploit}$ )), and demolition ( $C_{démol}$ ), social landlords, as owners and managers of rents, can minimize these costs by integrating, from the design stage, the use of materials and equipment that minimize the costs of maintenance, maintenance, operation and deconstruction.

For management costs ( $C_{gestion}$ ), the regulations in force require that employees have a salary. In order to minimize these salary costs, social landlords have the possibility, if the regulations allow it, to apply to the public authorities for relief or exemption from taxes on management costs.

As far as land acquisition costs are concerned ( $C_{terrain}$ ), social landlords can minimize them by applying for subsidies from the public authorities or local communities. These subsidies can take the form of a land donation, a long lease or an exemption from property taxes on built-up land.

For the costs related to the amortization of the debts contracted for the construction of the housing ( $C_{dette}$ ), social landlords can minimize these costs through the mobilization of equity and the financing of the program which is generally based not only on implicit (public guarantees from the State) and/or explicit (direct subsidies, public loans) support from the public authorities, but also by using the leverage of long-term debt, from a specific circuit set up by the public authorities (with low or zero interest rates, guaranteed by the State).

In view of the above, the intervention of the public authorities is crucial for the reduction of the costs supported by social landlords, which leads to a decrease in the production costs of new dwellings and ipso facto to a decrease in the level of equilibrium rent. This is one of the reasons why the financing circuits in this economic model of production and management of social housing are under the control of the State.

Although the supply of breakeven rent is moderate or low, it can be high for a household with a very modest income. And the mechanism for adapting the rent burden to this type of household is through the allocation of financial assistance to the household by the public authority.

#### **The Use of Subsidies for the Different Actors in the Sector.**

Other stakeholders (subcontractors and tenants) in the social housing production and management chain can also benefit from state or local government support (Hoorens D., 2013). Construction companies could benefit from tax and duty exemptions for imported materials and some tenants could receive support in the form of family allowances, solidarity incomes, guarantees against non-payment, support for water and energy consumption.

#### **Leverage Program Funding**

Unlike private actors, social landlords use the leverage of debt only to anticipate future rents and do not count on capital gains from resale. The level of future rents that will be applied over the entire period of operation of the housing (covering the debt amortization, maintenance, deconstruction and operating costs related to the housing built), is determined on the basis of local needs and the State programming.

The resulting borrowing capacity (Hoorens D., 2013) is compared to the production costs of new housing, in order to determine the need for public support, subsidies and equity (Figure 2).

Indeed, for a given level of housing, an increase in the cost of production will result in an increase in the need for equity or subsidies and that the borrowing capacity is proportional to the level of rents.

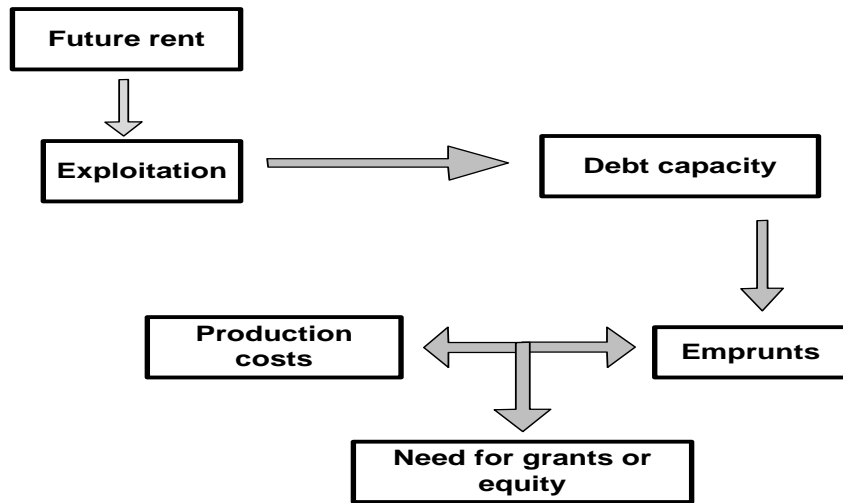


Figure 2:- SocialLessors LogicforAssessing ProductionFundingandManagement ofSocial(HoorensD.,2013).

The loans of social housing organizations is mainly done in an original circuit under the control of the public authorities (Figure 3) and on advantageous conditions and in a sustainable manner (very long loan periods at low interest rates).

In order to avoid any systemic risk to this scheme, the social housing organizations that benefit from this public funding must practice prudent management and are under the control and supervision of numerous bodies set up by the State.

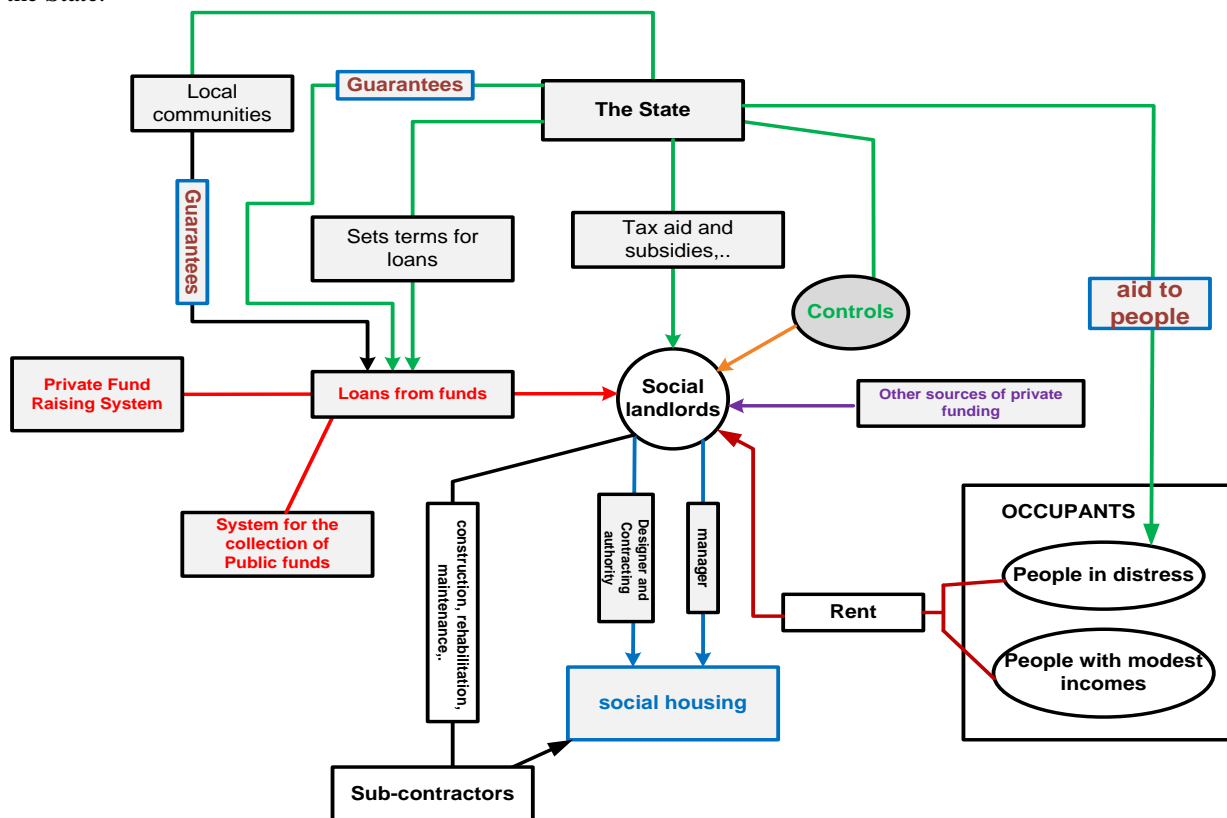


Figure 3:-Public funding pathway in the production and distribution economic model of the management of social housing.

From the above, the economic model based on public financing of social housing production and management is based on a system where:

1. Very long-term loans at low rates of return are guaranteed by the state. The financing of this debt is done on advantageous terms and in a sustainable way, through an original circuit (Figure 3) that is entirely under the control of the public authorities.
2. Subsidies from the state or local authorities in the form of land contributions or indirect fiscal aid (reduction of VAT, exemption from taxes on built-up land or customs on imported products, etc.), contribute to the reduction of production costs; contribute to the reduction of production costs;
3. Subsidies from companies in return for reservation rights on housing are accepted.
4. The financing of the debt by the mobilization of the social housing management body's own funds comes from the allocation of part of the operating results of its depreciated assets.
5. Social landlords, who have benefited from this public funding, have to practice prudent management and are under the control and supervision of numerous bodies created for this purpose by the public authorities.

This economic model, based essentially on public funding, implemented in a world of precariousness and uncertainty, would give low-income households some elements of stability, regardless of the level of economic development of their country. However, the budgetary difficulties faced by states in developing countries hit by economic crises could jeopardize this economic model of social housing production and management due to the scarcity of public financial resources.

Ultimately, access to housing by low-income households is conditioned by the availability of low breakeven housing on the market. This condition can only be met if the subsidies and equity mobilized for the production of these dwellings are high and the borrowing (which can come from public loans or commercial banks) is low.

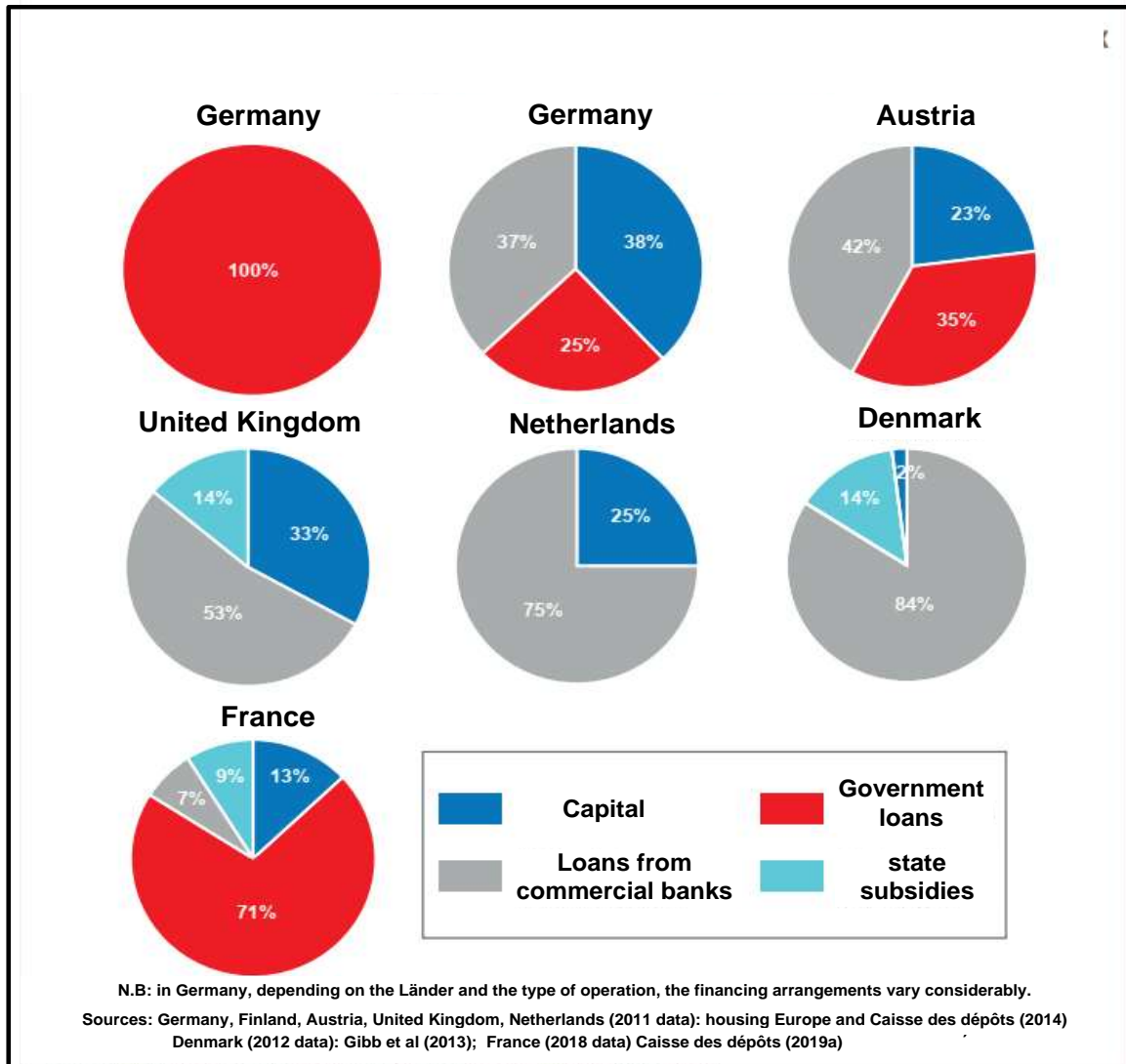
In view of the above, the economic model based on government funding is well suited for the production and management of social housing in developing countries. But what are the economic models for financing the production and management of social housing that have been implemented in Finland, the Netherlands, the UK, Austria, France and Cameroon?

### **Some economic models for financing social housing**

In this section, we present the economic models for financing social housing that have been implemented in some European countries and in Cameroon.

#### **European social housing financing system**

The European financing system (Banque des Territoires, 2020, 2021; and Louvot-Runavot, 2001) of social housing production is multifaceted and is reflected in the type of lending institution and the degree of subsidies or loan guarantees granted by the public authorities. Since 2009, we observe a continuous decrease in public support for the construction of new social housing (aid to stone) concomitant with the increase in aid to the individual (Figure 4). In Europe, we observe that between 2009 and 2018, aid to the stone had decreased by 42.7% while aid to the person increased by about 38% during the same period. While in 2009 the ratio between aid to persons and aid to stone was around 1, in 2018 this ratio had increased to 3.



**Figure 5:-** Distribution of funding for the production of social rental housing for some European countries (Territorial Bank, 2020).

### The case of Finland

In Finland, the financing of social housing construction is mainly public and is based on a system of subsidized or subsidized loans by a state agency called A.R.A. (Finnish Social Housing Development and Financing Centre) which improves the loans granted by the private sector by negotiating favorable loan conditions for social landlords. Ultimately, it is the state that guarantees these loans (Figure 5).

### Case of the Netherlands

In the Netherlands, the financing of social housing construction projects is exclusively based on loans provided by commercial banks (75%) and social landlords' own funds (25%). This financing system works through drawing rights and on the basis of an envelope granted by one of three private banks specialized in the financing of social housing and which have the possibility to refinance themselves by issuing "social bonds" (bonds oriented to finance social landlords). These loans, which are made on very advantageous terms, are based on a solid guarantee system at three levels (Figure 5):

1. The first level of public guarantee is the Central Fund for Social Housing (C.L.S.), which is a public body, financed by contributions from all social landlords. Support to these funds takes the form of zero-interest loans or grants. The role of this public body is to supervise the financial assistance sector for landlords in difficulty.

2. The second level of guarantee is private. It is offered by the WSW, Guarantee Fund for Social Housing, which is a private body created and funded by lessors to guarantee their bank loans. This organization only intervenes when the support of the CLS would not have been sufficient.
3. The third and final level of guarantee involves the Dutch state and local authorities intervening as a last resort to deal with payment difficulties of social landlords. This situation has never occurred. The guarantee of the State and the local authorities allows the landlords to finance themselves at lower costs.

### **The case of the United Kingdom**

In the UK, the financing of social housing construction programs is based on a hybrid economic model consisting of loans provided by commercial banks (53%), social landlords' own funds (33%) and public grants limited to 14%. Commercial bank loans are based on the mortgage guarantee system and some UK landlords (Housing Associations) have the possibility to turn to the bond markets (Figure 5). However, small landlords are not able to access the market directly, although they can come together to syndicate issues via a not-for-profit association (The Housing Finance Corporation) which can issue bonds with collateral based on several property assets.

The regulation of the social housing sector is carried out by the Home and Communities Agency, which does not guarantee the loans of landlords, but provides support to organizations in default via direct grants. In addition, the British government provides guarantees to certain social landlords in the framework of specific programs.

### **The case of Austria**

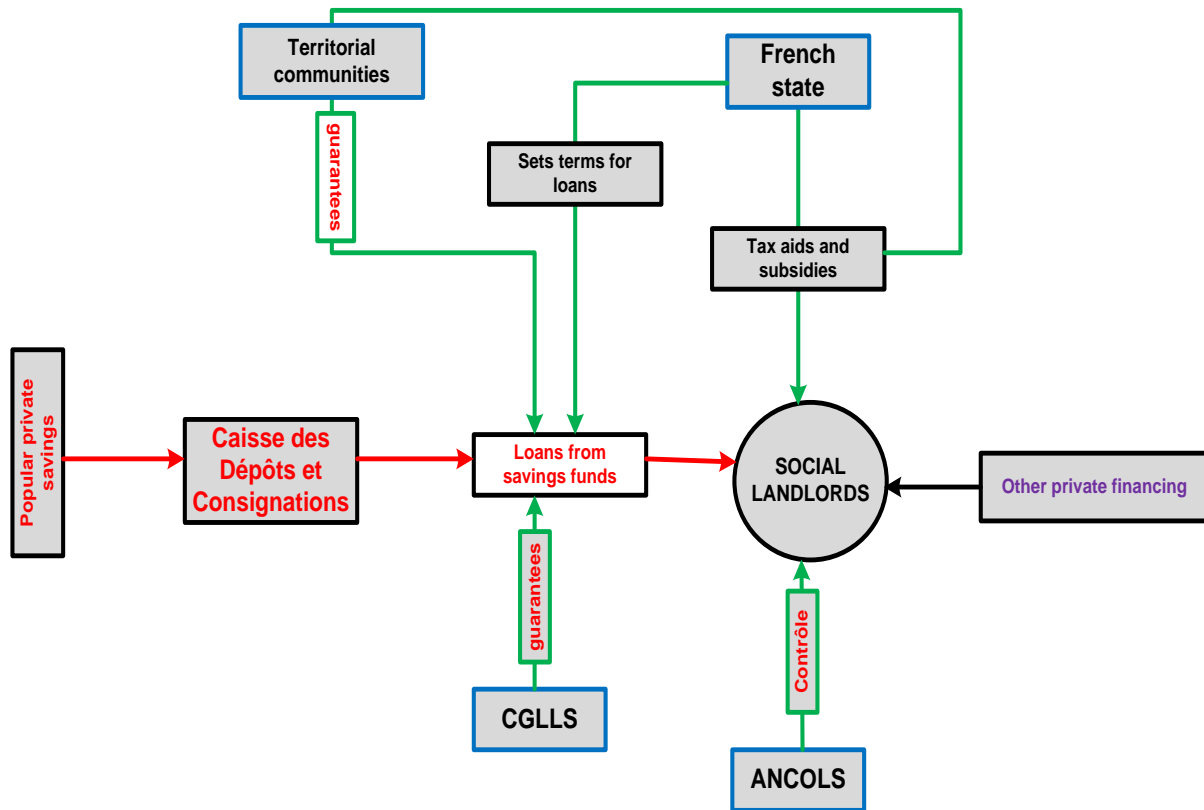
In Austria, the hybrid model of financing social housing construction projects combines long-term public loans (35%) on favorable terms, bank loans (42%) and landlords' own funds (23%). The social landlords finance a large part of their activities through mortgage loans from the savings banks (Bausparkassen).

In addition, a tax collected from companies and individuals is given to the regions, which choose the form of housing support (subsidies or public loans) they can give to social landlords. There are also specialized housing finance banks (Wohnbaubanken) that provide commercial loans to landlords and refinance themselves on the market through the issue of tax-exempt bonds for the construction of new housing (Figure 5).

### **The case of France**

In France, the hybrid economic model for financing social housing construction and renovation operations (Figures 5 and 6), relies mainly on public borrowing (71%), State subsidies (9%), bank loans (9%) and social landlords' own funds (13%). Among the main actors in the financing of the production and management of social housing in France are the French State, the "Collectivités Territoriales", the "Caisses des Dépôts et Consignation", "Action Logement" which is a public body in charge of managing the 1% of housing paid by employers, the "Fond National d'Aide à la Pierre" (FNAP), the "Caisse de Garantie du Logement Social" (CGLLS).

The public loans contracted in the long term (up to 80 years), are on very advantageous terms and come from the Banque des Territoires within the "Caisse de Dépôts et Consignations" (C.D.C) which collects, centralizes and manages part of the regulated savings of the French. It covers nearly 70% of the financing of social housing in France. The local authorities (by delegation of part of the public authorities) also provide public aid and subsidies for the construction, acquisition, demolition and renovation of social housing. The "Fond National d'Aide à la Pierre" (FNAP) intervenes to make the management of aid for housing more efficient and to guarantee the security, durability and visibility of such funding for social housing. And finally, the pooling of resources through the levy of a percentage collected by social landlords and managed by the "Caisse de Garantie du Logement Locatif Social" (CGLLS), which guarantees the "Prêts Locatifs Aidés à l'Insertion" (PLAI) and the "Prêts Locatifs à Usage Social" (PLUS). To ensure the control of public financing used in the production and management of social housing, a National Agency for the Control of Social Housing (ANCOLS) has been created by the French State.



**Figure 6:-** Financing channel for the production and management of social housing in France(Wendling C. 2019).

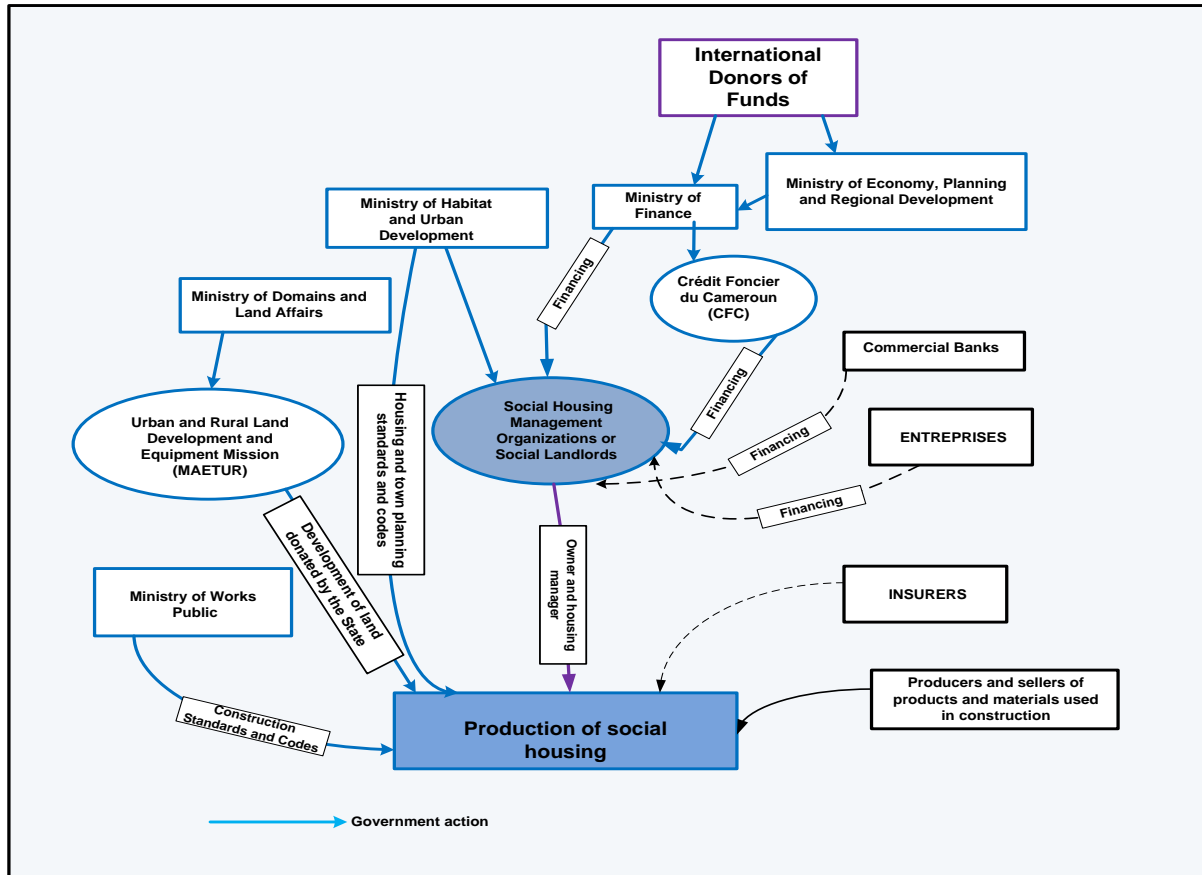
### The case of Cameroon

In Cameroon, the economic model (Figure 7) for the production and management of social housing relies solely on public funding (CAHF, 2019; GBM, 2020 and MINDUH, 2010).

The State, through its technical departments, subsidizes, assists and guarantees loans taken out by social landlords at favorable interest rates.

Indeed, part of the cost of social housing can be partially or fully covered by the state and local authorities:

1. The total or partial provision of land sites free of all occupancy by the Ministry of Lands, Cadastre and Land Affairs (MINDCAF) and local authorities.
2. Provision of land through the long lease mechanism by the Ministry of Lands, Cadastre and Land Affairs (MINDCAF) and local authorities.
3. The total or partial assumption of the costs of the primary and/or secondary roads and networks by the public body "Mission d'Aménagement et Équipement des terrains Urbains et Ruraux" (MAETUR);
4. Provision of subsidies and guarantees for loans contracted by social landlords by the Ministry of Finance (MINFI), the Ministry of the Economy, Planning and Regional Development (MINEPAT) and the "Crédit Foncier du Cameroun" (CFC);
5. The Ministry of Urban Development and Housing (MINDUH) supports social landlords in their construction of new social housing.



**Figure 7:-** Financing circuit for the production and management of social housing in Cameroon and the main actors of the sector.

“Crédit Foncier du Cameroun” is a public institution in charge of collecting and managing a 1.5% parafiscal tax levied on the income of employees in the Cameroonian formal economy. The resources thus collected are used to finance construction operations and mortgage loans for buyers.

Finally, the economic models for financing the production and management of social housing that have been implemented by European countries are based either on bank loans, public financing or a hybrid model based on a mixture of the economic model based on bank loans and on some or all public financing. Cameroon, on the other hand, has chosen to implement the economic model based solely on public financing, which is very well suited to the economies of developing countries.

### **Conclusion:-**

In this paper, the concepts of standard of living and low income are discussed and the stakeholders of the production chain and management of housing in general and social housing in particular are identified and their functions described within the said sector. Two economic models that can be used to finance the production and management of housing are presented.

While one of these economic models is based solely on bank loans, the other is based mainly on public financing.

It emerges that the economic model based on bank loans requires for its implementation, the existence of a solid financial market on which a network of successful banking institutions is based. If this condition is verified in some developed countries, this is not the case in developing countries where the banking sector and financial markets are either embryonic or non-existent.



The second economic model, which relies mainly on public funding, is technically the most reliable. The production and management of social housing in developing countries in general, as long as it is non-profit making, based on equity investments in a distant future and it takes into account the social dimension thanks to the low level of rents (applied during the whole operating period of the housing). This low level of rent is established in order to cover the costs supported by the social lessor, for a period of financial equilibrium of between 30 and 40 years.

When analyzing the economic models for financing social housing that have been implemented in Cameroon and in some European countries, we note that Cameroon has opted for the economic model based solely on public funding and some European countries use the economic model based solely on bank loans (Netherlands) or public funding (Finland) and others such as France, the United Kingdom, Germany, Austria and Denmark have opted for a hybrid economic model based on a mixture of bank loans and partial or total use of public funding.

At the end of this paper, the economic model based essentially on public financing would seem to be the most reliable for the production and management of social housing in developing countries, which could justify why Cameroon has implemented it. However, in a situation of economic crisis, the scarcity of public financial resources could jeopardise this economic model for the development of the production and management of social housing in developing countries.

Cameroon would benefit from adopting the economic model based on two approaches, one of which is dominated by state (contractual PPP) and the other strongly dominated by the private sector (institutional PPP) based on project companies. This will reduce the heavy involvement of the state budget and its indebtedness.

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