

Social housing in Portugal and in the Municipality of São Paulo. Comparison of space standards

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Abstract

This paper compares the space standards for social housing in Portugal and in São Paulo, and seeks explanations for differences in the socio-economic context of both territories. The *Controlled Cost Housing* (CCH) in Portugal and the housing built within the program *My Home My Life* (MHML) in São Paulo Municipality are studied. The number and type of rooms, the internal floor area of dwellings, the size of rooms, and the list and size of furniture and equipment are compared.

Three research questions are addressed: Which program has more demanding space standards? Which social-economic conditions explain the differences in space standards? How different space standards influence the users' satisfaction? To answer these questions, the study compares socio-economic indicators, space standards and users' satisfaction of both territories.

The study has shown that space standards set for the construction of social housing in CCH are more demanding than in MHML program. For instance, a CCH dwelling has almost two times the gross area of a MHML dwelling with the same number of rooms. The differences in space standards contribute to make the price of housing affordable to low income households in São Paulo Municipality. Although social houses are substantially smaller in São Paulo Municipality than in Portugal, the satisfaction level of dwellers with the size of dwellings is higher in São Paulo.

We conclude that different political options regarding how to provide housing to low income households directly influence the space standards set for dwellings and therefore their quality.

1 Introduction

It is generally accepted that the main goal of social housing policy should be to ensure decent housing for all households. This can be achieved by facilitating access to property, providing access to a rented house or ensuring minimum conditions of habitability in existing housing.

Both to provide access to property and to create a housing rental stock, the State may support the construction of social housing. The main objective is to ensure decent housing at affordable prices for low income households.

The construction of social housing is framed by parameters to ensure that it provides a safe, healthy, comfortable and functional environment, and also enables aesthetic satisfaction and is economic. These parameters vary according to the prevailing cultural, social, climatic, economic and technological conditions in a particular society.

To ensure functionality, a dwelling shall be large enough to meet the needs of its occupants for the activities of living, cooking, dining, sleeping, bathing and storing household goods. Space standards set the conditions to fulfil these objectives and usually specify the overall area, size and dimensions of rooms, ceiling height and layout of dwellings.

This paper compares space standards set for the construction of social housing in Portugal and in São Paulo Municipality, and seeks explanations for differences in the socio-economic context of each territory. The *Controlled Cost Housing* (CCH) in Portugal and the housing built within the program *My Home My Life* (MHML) in São Paulo Municipality are studied. The three research questions addressed are as follows:

- 1) Which program has more demanding space standards?
- 2) Which social-economic conditions explain the differences in space standards?
- 3) How different space standards influence users' satisfaction?

The following section explains the research methodology and Section 3 describes the two case studies. Section 4 compares the socio-economic indicators and Section 5 presents the results of the comparison between space standards. The results are discussed in Section 6.

2 Research methodology

The study was developed according to the following methodology:

- 1) definition of the problem and definition of concepts;
- 2) characterization of case studies;
- 3) comparison of socio-economic indicators;
- 4) comparison of space standards set by building regulations;
- 5) cross analysis of socio-economic indicators and space standards;
- 6) summary of key findings and discussion of results.

3 Case studies

3.1 Controlled Cost Housing

In Portugal, social housing is called *Controlled Cost Housing*. The State supports financially the construction of CCH through the *Instituto da Habitação e da Reabilitação Urbana* (Housing and Urban Rehabilitation Institute). CCH can be promoted by municipalities, housing cooperatives or private companies.

The main objective of CCH is to optimize the relation between cost and quality: dwellings should meet occupants' needs and have a reduced cost assessed within a long term perspective (construction, use and maintenance) [1].

When completed, the CCH dwellings may be sold or rented. There are no limitations of income to households buying or renting CCH dwellings. The CCH dwellings are subject to special rules determining the conditions of transferability for a period of five years.

The CCH construction program was created in 1983 [2]. Between 1984 and 2004 about 126,000 dwellings were built, with an average of 6,300 dwellings per year [3]. In later years, the construction of CCH decreased. In 2008 only 1,500 dwellings were completed [4].

A CCH housing development shall comply with all the legislation applicable within the location where it is built and shall also comply with specific building regulations for CCH [1][5].

3.2 Program My Home My Life

In São Paulo Municipality there are several programs to support the construction of social housing. A program launched in 2009 by the Federal Government of Brazil is called "*My house my life*". This program is run by *Caixa Econômica Federal* (Federal Bank) and the developments can be implemented by public or private entities, or in partnership.

The MHML program aims to reduce the housing deficit in Brazil. The goal is to build one million houses, and therefore facilitate access to housing for low income households. The priority of this program is to provide houses for households earning no more than 3 minimum wages, but, within this program, houses for households with incomes not exceeding 10 minimum wages are also built [6].

The MHML program supports the construction of new buildings. When completed, the houses are sold to households listed by local governments. Households have to meet the requirements of the program to apply for a dwelling, including having an income within a certain range [6].

A housing development built under the program MHML shall comply with all the legislation applicable within the location where it is built, and shall also comply with additional conditions set by the program [7][8][9].

4 Comparison of social-economic indicators

4.1 Housing stock

In 2001, the housing stock of São Paulo Municipality was about 55% of the housing stock in Portugal. There was a small deficit of housing per family in São Paulo Municipality and a surplus in Portugal. The housing tenure was very similar in both territories.

Table 1: Housing stock indicators [10][11][12]

	Year	Portugal	São Paulo Municipality	
Housing stock	2001/2000	5.02	2.98	millions of dwellings
Dwellings per family	2001/2000	1.37	0.95	
Housing tenure:	2001/2000			
- owner occupied		75.7	69.4	%
- rented		20.8	21.6	%
- other		3.5	9.0	%

4.2 Housing demand

In 2001, the housing deficit in São Paulo Municipality doubled the one in Portugal. The number of unoccupied dwellings in Portugal was 30% higher than in São Paulo. In both territories, the unoccupied dwellings were enough to face the housing deficit, although they might not have the location or be suitable to meet the housing demand. The housing deficit in São Paulo is probably undervalued given that the number of dwellings per family is less than 1 (see 4.1).

Also in 2001, the main deficiency of the Portuguese housing stock was its poor maintenance condition. In São Paulo Municipality, the poor urban planning, the lack of urban infrastructures and overcrowded dwellings were the main deficiencies.

Table 2: Housing shortage [10][13]

	Year	Portugal	São Paulo Municipality	
Housing deficit	2001/2000	100	203	thousands of dwellings
Unoccupied dwellings	2001/2000	543	420	thousands of dwellings

4.3 Housing price

The price per square meter in the MHML program is about 40% of the same value in CCH. Due to differences in price per square meter and the overall area of the dwellings, the price of a MHML dwelling with two bedrooms is about 20% of the same dwelling in CCH. The prices for flats and single family houses are different in the MHML program.

Table 3: Housing prices [5][7][14]

	Year	CCH	MHML		
			Flat	House	
Price of two bedroom dwelling	2009	102,102	20,124	18,576	€
Price per square meter	2009	1,201	479	531	€

4.4 Family income

The GDP per capita of São Paulo Municipality is approximately 74% of the same value in Portugal. The minimum wage in the State of São Paulo is approximately 45% of the same value in Portugal. The annual income of the 20% of the population of São Paulo Municipality with lower income is 12.7% of the same value in Portugal. The annual income of the 20% of the population of São Paulo Municipality with a higher income is 68.9% of same value in Portugal.

Table 4: Family income [15][16][17][18][19][20]

	Year	Portugal	São Paulo Municipality	
Annual GDP per capita	2007	15,400	11,375	€
Monthly minimum wage	2009	450	195 to 211	€
Annual income per person:				
- 20 % of the population with lower income	2007	3,667	466	€
- 20 % of the population with higher income	2007	22,310	15,364	€

4.5 Housing affordability

In the MHML program the monthly mortgage is 10% of the gross household income, with a minimum value of €19.35. The amortization period is 10 years. In CCH, the households can buy a dwelling with their own savings and/or obtain financing (a loan) from a financial institution. Each household negotiates the loan conditions and the monthly mortgage varies according to their options. Alternatively, a household can choose to rent a dwelling. In the Social Renting Regime the rent is estimated based on the household income and composition. For households with an income below 3 minimum wages, the rent is less than 20% of their income [21].

Table 5: Mortgages [7]

	Portugal	São Paulo Municipality	
Mortgage per monthly gross income	Varies	10	%
Amortization of housing price	100	From 12.5 to 39.8	%
Amortization period	Up to 45	10	years

4.6 Housing satisfaction

According to studies analyzed, there are many similarities in the way that dwellers of social housing in Portugal and in São Paulo assess the spatial characteristics in their dwellings [22][23]. Dwellers positively evaluate the size of the dwelling as a whole and the organization of rooms. However, their assessment is negative for the size of the kitchen and service areas. The level of satisfaction with the size of the dwelling expressed by dwellers of social housing in São Paulo Municipality is higher than that expressed by dwellers of social housing in Portugal.

5 Comparison of space standards

5.1 Number and type of rooms

The main difference between CCH and MHML is the number of bedrooms. CCH dwellings can have from no bedroom up to five bedrooms [1]. All MHML dwellings must have two bedrooms [7].

5.2 Area of dwellings

The floor area of flats set in MHML program is 71% of the minimum floor area and 61% of the maximum floor area set in CCH. The gross area of flats set in MHML program is 63% of the minimum gross area and 53% of the maximum gross area set in CCH. In the MHML program, flats are slightly bigger than single family houses because they cannot be enlarged.

Table 6: Area of two bedroom dwellings [5][7][24]

CCH				MHML				
Floor area		Gross area		Floor area		Gross area		
Min.	Max.	Min.	Max.	House	Flat	House	Flat	
52	61	67	79	32	37	35	42	m ²

5.3 Size and area of rooms

The floor area of bedrooms in MHML program is 82% of the same value in CCH. The floor area of the living room, kitchen and laundry in MCMV program is 60% of the same value in CCH. The floor area of the bathroom in MHML program is 44% of the same value in CCH. No area is set in MHML program for storage and circulation.

Table 7: Floor area of rooms for two bedroom dwellings [5][7][8][9][24]

	CCH	MHML	
Bedrooms	19.5	16.0	m ²
Living room, kitchen and laundry	24.0	14.4	m ²
Bathroom	5.0	2.2	m ²
Storage and circulation	7.5	–	m ²
Total	56.0	32.6	m²

5.4 Furniture and equipment

The furniture and equipment that must be included in a dwelling of MHML program is less than the one that must be included in HCC. The physical and use dimensions of furniture and equipment set for MHML program are the same as or smaller than that set for CCH [1][8][9][26]. The most significant difference consists of the furniture of the living room and the clear floor space of kitchen, bathroom and foyer. In CCH the clear floor space is larger to ensure the accessibility of disabled persons.

6 Conclusions and discussion

6.1 Results

Which program has more demanding space standards?

The space standards set for construction of new CCH housing in Portugal are more demanding than those set for MHML Program in São Paulo Municipality.

Which social-economic conditions explain the differences in space standards?

In MHML program, low income households buy highly subsidized housing. The non refundable investment of the Federal Government is more than half of the dwelling's price. In order to increase the number of households covered by the MHML program the price of dwellings is minimized and, as a result, the demand level in space standards is necessarily low. Furthermore, the low space standards of MHML program make the price of dwellings affordable for low income households in São Paulo Municipality.

In Portugal, low income households may rent a social house with financial support from the State. Hence the aim is to build social housing that ensures adequate living conditions for dwellers throughout the lifespan of the buildings.

How different space standards influence the users' satisfaction?

Social housing in São Paulo Municipality has almost half of the area of social housing in Portugal. However, according to studies analyzed, dwellers express a higher level of satisfaction with the size of

dwellings in São Paulo Municipality. Therefore, we can conclude that dwellers in Portugal have higher expectations than those in São Paulo.

6.2 Discussion

Given the similarities between Portugal and São Paulo Municipality regarding how the dwellings are used, the differences in space standards raise the following question: are space standards too demanding in Portugal or excessively lenient in São Paulo Municipality?

To answer this question we should take account that space standards specified for Portugal are identical to those set in several European countries, such as Spain, France and The Netherlands [27]. Whereas the floor area per inhabitant set in MHML program is near the critical threshold below which the incidence of pathological conditions tends to increase (ie, accidents, violence, insalubrity, disease) and within a range in which the dwellers satisfaction with their housing tends to be negative. Therefore we may conclude that space standards set in MHML program only take into account the basic needs of present daily life. A desirable improvement in the quality of life of São Paulo population may mean that, in the short or medium-term, the dwellings presently being built will become obsolete.

Regarding the economic framework of social housing policy, one has to point out that MHML program requires a substantial non refundable investment of the Federal Government. Without enough return of the initial public investment it is difficult to continue to build new developments. MHML program will probably not provide housing for all low income households, being thus debatable if it is a fair and efficient application of public resources. There are other possibilities to meet the housing needs of low income households that can provide decent housing and higher return on public investment. Subsidized rents, self built housing, evolutionary housing or a simple increase in the amortization period are alternative solutions.

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