Charge for building rights: a puzzle to be solved

Outorga onerosa do direito de construir: um enigma a ser desvendado

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ABSTRACT
This paper proposes a methodology to assess the degree of understanding of the urban planning tool "charge for building rights" (CBR / outorga onerosa do direito de construir) by municipal governments in Brazil, based on the analysis of their master plans. The CBR is an urban planning tool which was nationally regulated by the City Statute in 2001 and included in a large number of master plans developed thereafter. Its conception is quite complex and its application depends on a distinguished technical capacity. Hence, the way the CBR is presented in the master plan text provides clues about how that administration intends (or not) to implement the instrument in its territory. It is inferred that the tool just cited or poorly specified in that regulation will probably not be used, or its applicability will be endangered. The proposed methodology involves the analysis of legal texts based on six groups of criteria. Specific questions were developed for each group, the answers were valued (1 or 0), and the numbers obtained were processed in a specific way for each criteria grouping. The combination of scores obtained per group provides an index per city. This index ranges from zero to one: the closer to one, the more detailed the instrument, and the more capable the municipality is to apply it, and vice versa. This methodology was applied to 159 master plans of municipalities in the State of São Paulo. The results show that, in general, the cities do not have a full understanding of this new urban planning tool. In other words, the instrument remains an enigma to be unraveled for a large portion of municipal administrations.

Keywords: charge for building rights, land value capture, municipal government, São Paulo, Brazil.

RESUMO
Este artigo propõe uma metodologia para avaliar o grau de apropriação da outorga onerosa do direito de construir (OODC) pelas administrações municipais no Brasil, a partir da leitura de seus planos diretores. A OODC é um instrumento urbanístico que foi regulamentado em nível nacional pelo Estatuto da Cidade em 2001 e incluído em grande parte dos planos diretores desenvolvidos a partir daí. Sua concepção é bastante complexa e sua aplicação depende de uma capacidade técnica diferenciada. Daí, a forma como a OODC é colocada no texto do plano diretor fornece indícios de como aquela administração pretende (ou
não) aplicar o instrumento em seu território. Infere-se que o instrumento que tenha sido apenas citado ou pouco especificado nesta regulamentação provavelmente não será utilizado, ou terá sua aplicabilidade muito comprometida. A metodologia proposta consiste na análise dos textos legais a partir de seis grupos de critérios. Foram elaboradas questões específicas para cada grupo, as respostas foram valoradas (1 ou 0) e os números obtidos foram trabalhados de uma forma específica para cada agrupamento de critérios. A combinação das notas obtidas por grupo fornece um índice por cidade. Esse índice assume um valor entre zero e um: quanto mais perto de um, maior o detalhamento do instrumento e mais apto está o município a aplicá-lo e vice-versa. Essa metodologia foi aplicada em 159 planos diretores de municípios do Estado de São Paulo. Os resultados mostram que, de modo geral, os municípios paulistas, apesar de contarem com a OODC em seus planos diretores, não se apropriaram desse novo instrumento urbanístico. Isto é, o instrumento permanece para grande parte das administrações municipais como um enigma a ser desvendado.

**Palavras-chave:** outorga onerosa do direito de construir, recuperação da valorização da terra, administração municipal, São Paulo, Brasil.

### 1 INTRODUCTION

This article proposes a methodology to assess the degree of appropriation of the charge for building rights (CBR) by municipal administrations in Brazil, based on the analysis of their master plans. The CBR was regulated at national level by the City Statute in 2001 and included in most of the master plans developed since then. It is an urban planning instrument that can simultaneously contribute to the improvement of urban development policy and meet municipal financing needs. This is achieved by allowing municipalities to directly increase their revenues through the collection of financial compensation based on the definition of certain urban planning parameters. The City Statute was the result of discussions that began around thirty years earlier, which introduced the idea of 'created land', the foundation of the CBR.

The concept of "created land" did not exactly originate as an instrument. It is primarily a concept developed between 1975 and 1976 by a group of

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researchers from the Prefeito Faria Lima Foundation - Center for Studies and Research on Municipal Administration (CEPAM), linked to the Secretary of the Interior of the State of São Paulo. According to the definition in the first document published by this group: "created land is the creation of additional areas of usable floor not directly supported on the ground" (MOREIRA et al, 1975, p. 7).

The concept of created land was conceived with the idea of controlling urban growth by regulating density, based on the distinction between property rights and the right to build. At that time, there was an assumption of a directly proportional relationship between built density and population density. An increase in the former would lead to a higher demand for green areas, public facilities, and infrastructure. The figure below illustrates this concept well.

Three instruments derive from this concept: the single floor area ratio\(^2\) (FAR), the transfer of building rights and the proportionality between public and

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\(^2\) The FAR establishes the relationship between the plot area and the buildable area.
private land. (MOREIRA et al, 1975). All of them aim to equalize the share of land value resulting from the different criteria imposed by the zoning law. The argument is clear: "the setting of different FAR in different zones leads to a different valuation of land" (MOREIRA et al, 1975, p. 5). It is this distortion that these instruments aim to correct.

The construction of the notion of OODC is not limited to these initial formulations. In a study of this process in Brazil, Furtado et al (2007) highlight the theoretical discussion of the 1970s and 1980s, which revealed the fragility of traditional urban regulation instruments, given the process of densification and verticalization of cities and the evident impossibility of including groups of different income levels in the supply of their goods, including housing and road and sanitation infrastructure. In this sense, the capacity of the new instrument is sometimes overvalued, as revealed by the justifications put forth during this period:

1. The restoration of urban balance, especially between public goods and services on one hand and demand on the other, resulting from the densification process, through the donation of areas (land) to compensate for the densification process;
2. The differential land appreciation that benefits some owners, largely due to land use and occupancy regulations and public investments, justifying mechanisms to recover this appreciation for the public authority;
3. The role of promoting social equity, ensuring equal rights to build and proposing the equitable distribution of costs and benefits of public investments;
4. The generation of resources that, in a compensatory manner, would finance housing programs and urbanization of popular areas;
5. The necessary subordination of economic power to the general interest and the harmonization of property rights with the social function of property;
6. The function of standardizing urban land prices and providing a regulatory mechanism for the real estate market (FURTADO et al, 2007, p. 6).

Due to the overvaluation of the instrument's capacity or for other reasons not explored within the scope of this article, there are substantive differences between the initial propositions of created land and the national regulation of the Charge for Building Rights. However, the distinction between the property right and the right to build remains the foundation of the instrument.
In broad terms, the CBR operates based on the definition of basic and maximum FAR. The property right includes the possibility of construction up to the limit established by the basic FAR. Between the basic and maximum FAR, the right to build is granted by the government and subject to charges. The justification for this charge is that the appreciation resulting from the change in building potential, that is, the ability to construct a larger area on the same land, is granted by the government. Therefore, the government has the prerogative to charge for this granted benefit.

For the OCBR to be applied, it is necessary for the instrument to be provided for in the municipality's master plan\(^3\). The master plan must establish the basic and maximum FAR and the areas where the instrument applies. The CBR can also be used in a similar way to allow changes of use, as long as the master plan also covers these cases.

In addition to these parameters that must necessarily be included in the master plan, for the CBR to be applied, it is also necessary to define the nature of the compensation to be paid by the beneficiary, the formula for calculating the charge, and the destination of the resources\(^4\). This second set of parameters can either be established by the municipality's master plan or defined by subsequent legislation.

This brief overview of the foundations and parameters for the operationalization of the CBR clarifies that this is a complex instrument, the application of which depends on differentiated technical capacity. Therefore, the way in which the OODC is placed in the text of the master plan provides indications of how the administration intends - or does not intend - to apply the instrument in its territory. It can be inferred that an instrument that has only been

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\(^3\) The master plan, embodied in a municipal law, is "the basic instrument of urban development and expansion policy" (BRASIL, 2001, art. 1).

\(^4\) Strictly speaking, the City Statute already establishes the purposes of these funds - land regularization; execution of housing programs and projects of social interest; constitution of a land reserve; planning and directing urban expansion; setting up urban and community facilities; creating public leisure spaces and green areas; creating conservation units or protecting other areas of environmental interest; protecting areas of historical, cultural or landscape interest - however, it is up to the municipality to specify how the funds obtained through the OODC will be used.
mentioned or barely specified in this regulation is likely not be used or will have its applicability greatly compromised.

2 METHODOLOGY

The degree of appropriation of the CBR by local administrations was empirically verified by analyzing the master plans of São Paulo State’s municipalities. This investigation made it possible to assess whether the municipalities had effectively appropriated the CBR. The research was based on the database of master plans made available by the Fundação Prefeito Faria Lima - Centro de Estudos e Pesquisas da Administração Municipal (CEPAM) in 2010. Out of the 645 municipalities in São Paulo, 250 were required to develop or revise their master plans in accordance with the criteria established by the City Statute. The analyzed sample consists of 159 master plans, representing 63.6% of the municipalities with this obligation.

From this sample, a quantitative survey was carried out, providing evidence of the degree of appropriation of the instrument by municipalities in São Paulo. In addition to specific data on the CBR, the first data collected was the number of pages in the documents. It is believed that this simple survey already constitutes an indicator of the complexity of master plans. Although the isolated analysis of this data does not allow for elaborate conclusions, its combination with the survey of the CBR instrument provides arguments about the complexity involved in master plans.

The specific survey of the details of the CBR was conducted based on the criteria presented in the table below (Table 1). These criteria allow for assessing whether the instrument, first and foremost, was considered by municipalities in the development of their master plans, and if so, what treatment the instrument

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5 The criteria are: (i) having more than 20,000 inhabitants; (ii) being part of metropolitan regions; (iii) being tourist resorts; (iv) having major works that put the environment at risk or that greatly change the region, such as airports, highways, dams or hydroelectric dams; and (v) having a Master Plan that is more than 10 years old - in these cases, the Plan must be revised or redrawn (BRASIL, 2001, art. 41).

6 The city of São Paulo was excluded from the analysis because its conditions are very specific and do not lend themselves to generalizations.
received in the wording of the municipal law. It can be inferred that an instrument that has been merely mentioned or poorly specified in this regulation is likely not to be used or will have its applicability severely compromised.

These criteria were formulated in the form of dichotomous questions aimed at extracting information about the depth with which the CBR was addressed in the legal documents.

Table 1: Survey criteria for the OODC quantitative survey

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Yes (1)</th>
<th>No (0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the CBR provided for in the Master Plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the Master Plan refer to additional regulations?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the area(s) of CBR incidence defined?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the building stock defined?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the Master Plan refer to specific law for defining the area?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAR parameters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are basic FAR(s) defined?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the basic FAR single?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the basic FAR unitary?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are maximum FAR(s) defined?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the maximum FAR single?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the Master Plan refer to specific law to define the FAR?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation definition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there financial compensation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there compensation in public works?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has another form of compensation been defined?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the Master Plan refer to a specific law to define the compensation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formula to calculate compensation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the formula use the “surplus construction value” method?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the formula use the “virtual plot” method?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the formula use the “land value x surplus FAR” method?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the formula establish another calculation method?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the Master Plan refer to specific law for defining the formula?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allocation of resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a specific fund for CBR resources?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there another established destination for CBR resources?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there a council or other form of social control for the CBR?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Own authorship.

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7 For details of the related counterpart calculation formulas, see Furtado et al, 2007.
The numbers obtained in this survey were processed to provide an index per city revealing the degree of detail with which the instrument was treated in the master plan. Each group of criteria was processed according to a specific method, taking into account its particularities. The only criterion that was consistently processed in the same way was the one referring to additional regulation by specific law. This criterion, when verified, was assumed as a reducer of the index for the group, as it hinders the self-application of the instrument, i.e., it indicates that there are additional requirements to fulfill for the instruments to be effective.

Each index assumed a value between zero and one: the closer to one, the greater the detail of the instrument, and the more prepared the municipality is to apply it (and vice versa). The index of the degree of appropriation of the CBR was constructed from six intermediate indices, considering the groups presented in the second column of the table above.

The first group, which considers the master plan, was treated as follows: a mention in the master plan results in an index of one, and additional regulation reduces this index by half. The indices for the "area" and "definition of occupancy parameters" groups were calculated as the average of the criteria in these groups, applying the reducer, as described earlier. In the case of these two groups, it is assumed that the instrument was as detailed as more criteria were included in the text of the law.

For the three subsequent groups - "compensation definition," "formula for calculating compensation", and "allocation of resources" - the index calculation was different, as it is assumed that the instrument was sufficiently detailed if it incorporates at least one of the listed criteria. Thus, a municipality that considers one or more criteria listed in the definition of the compensation, the formula, or the allocation of resources obtained an index of one, applying the reducer in the same terms described earlier.

Therefore, an index was established for each municipality. This index provides a measure of the degree of detail of the instruments and, more
importantly, allows for comparisons between municipalities or groups of municipalities. The results of this research are presented in the following section.

3 PRESENTATION AND DISCUSSION OF RESULTS

The methodology was applied to 159 master plans of municipalities in the state of São Paulo. The results show that, overall, São Paulo's municipalities have not fully embraced this new urban planning instrument, as the calculated indices are very low. However, there is a directly proportional variation according to the size of the municipality: larger municipalities tend to have slightly more detailed CBR than smaller ones. Examining the results according to population size also reveals that municipalities with populations up to 30,000 inhabitants have slightly higher rates, similar to those of municipalities with over 300,000 inhabitants.

Despite CBR being included in the majority of the analyzed master plans - it is provided for in 84% of them - it is noted that this mention was not accompanied by adequate specification. The first variable analyzed, the number of pages in the documents, shows a significant variation in the sample, with an average of 66 pages and a standard deviation of 45 pages.

The first indication of this inadequate and insufficient treatment of the instruments is given by the proportion of master plans that refer their regulation to specific law: 81% in the case of CBR. Among these, according to a survey carried out by the Brazilian Institute of Geography and Statistics (IBGE), only 55% have specific laws on the charge for building rights (IBGE, 2008). In other words, in a considerable portion of the analyzed municipalities, the instrument still depends on a legislative process to become effective.

In addition to these general observations, there is a notable lack of definition of criteria for the adoption of the instrument listed in the master plans.

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8 Although this survey is considered relevant, it should be noted that research carried out by the Pólis Institute has identified that the information declared by municipalities for the IBGE's Basic Municipal Information Survey does not necessarily correspond to the reality of the legislation and effective experiences of applying the Right to Build Concession instrument in Brazilian municipalities (see Santoro and Cymbalista, 2006).
Regarding the perimeters where the CBR would apply, a basic requirement for the instrument's application, only 54% of the master plans present some definition.

As the criteria become more sophisticated, they become scarcer in the texts of the master plans, highlighting the widespread lack of knowledge about the instruments and the lack of intention to apply them. For example, the single and unitary basic FAR appears in only 2% of the legal texts analyzed in the regulation of CBR.

The survey on the definition of compensation and their calculation formulas presented similar results, representing manifestations of the non-appropriation of the CBR by the municipalities in question. In these criteria, the few municipalities that have legislated on the matter have left the form of payment of compensation open, considering payment either in works or in cash, without defining how the calculation for payment or equivalence will be done. Such ambiguity can compromise the effectiveness of the instruments, as individually negotiated counterparts may be insignificant.

Finally, with regard to the definition of the destination of the funds, the lack of social control mechanisms stands out. Despite the City Statute favoring such institutes (BRASIL, 2001, art. 4), only 3% of the analyzed master plans mention some form of social control for the allocation of revenues obtained from CBR. At this point, it is evident that municipalities have been negligent and are missing a valuable opportunity to develop socially. Furthermore, social control can contribute to the proper allocation of resources and thus ensure the fairness of the processes.

The analysis of the indices obtained by the survey reveals that although the CBR, despite being mentioned in the majority of master plans, has been poorly assimilated by the municipalities. The instrument had an average index of 0.33, indicating that there is room for improvement in most municipalities.

The indices obtained according to the population size of the municipalities also provide interesting information. As shown in the table below (Table 2), the detailing of the instrument in municipalities with up to 300,000 inhabitants was
significantly lower than in larger municipalities. The assessment of results according to population size also reveals that municipalities with up to 30,000 inhabitants show slightly higher indices, similar to municipalities with over 300,000 inhabitants.

Table 2: CBR Index by Municipality Size (population)

<table>
<thead>
<tr>
<th>Population</th>
<th>Up to 30 thousand inhabitants</th>
<th>30 – 50 thousand inhabitants</th>
<th>50 – 100 thousand inhabitants</th>
<th>100 – 300 thousand inhabitants</th>
<th>300 – 500 thousand inhabitants</th>
<th>Above 500 thousand inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample (number of municipalities)</td>
<td>30</td>
<td>39</td>
<td>35</td>
<td>37</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>CBRIndex</td>
<td>0,34</td>
<td>0,31</td>
<td>0,29</td>
<td>0,34</td>
<td>0,41</td>
<td>0,4</td>
</tr>
</tbody>
</table>

Source: Own authorship.

4 CONCLUSION

The Charge for Building Rights remains an enigma to be unraveled by municipal administrations. This is because, despite the urban planning instrument being included in the new master plans developed since 2001, the foundations for its implementation are not in place. The research indicates that there is room for the instrument to be worked on and improved at local level. However, for CBR to be effective in municipalities, one should not rely solely on the index obtained or the parameters listed by this work but take into account the specific characteristics and possibilities of each city.

It is important to note that the proposed index does not exhaust the diagnosis of OODC at municipal level, but it can contribute to defining parameters for more in-depth investigations and also for the design of policies aimed at supporting and technically training municipalities. The comparison between municipalities is another interesting possibility that an index like this opens up. Furthermore, the intersection with other variables can bring important topics for future research related to urban policy and new urban planning instruments.

In the context of the presented research, the exploration of these possibilities has only just begun. For example, the relationship between the degree of appropriation of CBR and the size of municipalities suggests further investigation. The way master plans were developed and the influence of larger
municipalities (for example, in metropolitan regions and urban agglomerations) are issues to be explored by complementary research.
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