

**Sale of Building Rights:  
Overview and Evaluation of Municipal Experiences**

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## **Abstract**

This paper presents the findings of a study on the sale of building rights (*Outorga Onerosa do Direito de Construir*—OODC) as an instrument of municipal urban planning in Brazilian cities. The study was carried out between December 2005 and June 2006 in twelve municipalities which are compared with respect to the legal form of the instrument, its design and objectives, date of first application, land utilization indices, area where OODC is applicable, formula to calculate the charge due, revenues collected, monitoring and use of revenues, effects on land price and real estate property tax, and how effective the instrument has been in capturing incremental land values. The main finding is the great diversity that exists in the application of the instrument by cities. In other words, the cases studied do not provide a single model for application of the OODC but help to improve our understanding of the role and the potential of the OODC as a land value capture instrument.

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### **Acronyms and Abbreviations**

ATME	Área Total Máxima de Edificação (Maximum Total Area Built)
CA	Coeficiente de Aproveitamento (Utilization Coefficient)
CGPD	Conselho Geral do Plano Diretor (General Council of Master Plan)
COMPUR	Conselho Municipal de Política Urbana (Municipal Urban Policy Council)
CUB	Custo Unitário Básico (Basic Unit Cost of Construction)
EC	Estatuto da Cidade (Statute of the City)
FMDU	Fundo Municipal de Desenvolvimento Urbano (Municipal Development Fund)
FMH	Fundo Municipal de Habitação (Municipal Housing Fund)
FUNDHAB	Fundo de Habitação (Housing Fund)
GESVAT	Gestão Social da Valorização da Terra (Social Management of Land Value Increment)
IAA	Índice Alienável Adensável (Sellable Densification Rate)
IAB	Instituto de Arquitetos do Brasil (Brazilian Institute of Architects)
IBGE	Instituto Brasileiro de Geografia e Estatística (Brazilian Institute of Geography and Statistics)
IPPUC	Instituto de Pesquisa e Planejamento Urbano de Curitiba (Institute of Research and Urban Planning of Curitiba)
IPTU	Imposto Predial Territorial Urbano (Urban Real Estate Tax)
LDC	Lei de Desenvolvimento Comercial (Business Development Law)
LDI	Lei de Desenvolvimento Industrial (Industrial Development Law)
LO	Licença Onerosa (Permit for a Fee)
LOM	Lei Orgânica do Município (Organic Municipal Law)
MUNIC	Pesquisa de Informações Básicas Municipais (Basic Municipal Information Survey)
OOCD	Outorga Onerosa do Direito de Construir (Sale of Building Rights)
OP	Operação Urbana (Urban Operation)
PDDU	Plano Diretor de Desenvolvimento Urbano (Urban Development Plan)
SC	Solo Criado (Created Land)
SEMTHURB	Secretaria Municipal de Terras, Habitação, Urbanismo e Fiscalização (Municipal Secretariat of Land, Housing, Urban Planning and

	Supervision)
SEPLAM	Secretaria de Planejamento Municipal (Municipal Planning Secretariat)
SINDUSCON	Sindicato da Indústria da Construção Civil (Civil Construction Industry Syndicate)
TDC / TRANSCON	Transferência do Direito de Construir (Transfer of Building Rights)
TO	Taxa de Ocupação (Occupancy Rate)
UEU	Unidade de Estruturação Urbana (Urban Structuring Unit)
ZEIS	Zonas Especiais de Interesse Social (Special Social-Interest Zone)

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## **Sale of Building Rights: Overview and Evaluation of Municipal Experiences**

### **A. The research project**

#### **Introduction**

The development of this research project was based on a detailed bibliographic review focused on the basic concepts of the instrument. The research was developed in the form of the survey, analysis, systematization, and comparative evaluation of twelve applications of the OODC. The survey and the detailed study of the cases took the form of personal interviews with local officials conducted by the chief researchers between April and May 2006. The research approach was chiefly qualitative regarding the application of the OODC, a characteristics that is reflected in the questions in the interview guide.

The following table lists the cities covered by this research project.

**Population data**

Municipality	Population 2000	Estimated Population 2005
Alvorada – RS	183,968	210,233
Blumenau – SC	261,808	292,998
Campo Grande – MS	663,621.	749,768
Curitiba – PR	1,587,315	1,757,904
Florianópolis – SC	342,315	396,778
Goiânia – GO	1,093,007	1,201,006
Natal – RN	712,317	778,040
Niterói – RJ	459,451	474,046
Porto Alegre – RS	1,360,590	1,428,696
Salvador – BA	2,443,107	2,673,560
Santo André – SP	649,331	669,592
São Luís – MA	870,028	978,824

Source: IBGE, 2000 Demographic Census

Various problems occurred in the course of the research. However, we believe to have achieved the goal of contributing to a greater understanding of the OODC, in terms of its functionality and effectiveness as an instrument of urban policy, recovery of valorization of urban land for the community and financing of social urban development programs.

The availability and the good will of the interviewees were of fundamental importance in ensuring that the research met its objectives. Our respondents made every effort to help us obtain information for which in many cases people did not know where to look for. We hope that these results can now be used to improve future applications on the OODC. We assume full responsibility for any mistakes, omissions, or misunderstandings of the case studies presented here.

### **Preliminary considerations**

The OODC has a history of effective application, in one form or another, in about ten cities, even though the instrument appears in the Master Plans for more than 200 Brazilian cities.<sup>1</sup>

The expression “in one form or another” is used on purpose. The fact is that the OODC, as defined in the *Estatuto da Cidade* (EC) (Statute of the City, Federal Law no. 10.257 dated July 10, 2001) has many precedents, inspired by the idea of urban development legislation designed to increase land use flexibility in exchange for a fee, such as *Operações Interligadas* [Interlinked Urban Operations], no longer in use.

The EC, which regulates Articles 182 and 183 of the Federal Constitution of 1988 (Urban Policy) was not approved until 2001, and the Urban Reform Movement that inspired the EC has its roots in the two decades preceding the Constitutive Assembly of 1988. This means that variants of the OODC mechanism began to be applied, sometimes under the traditional name of *Solo Criado* (SC) [Created Land], sometimes under alternative names, as early as the 1980s.

A critical task of this research project was, precisely, to determine which of the urban management instruments should be considered, irrespective of its name, as effectively equivalent to the OODC concept established in the EC, and which other variants inherited from the pre-Statute era also deserved this classification.

Thus, we decided to incorporate into the research, in addition to the OODC in effect in Natal-RN and Santo André-SP, the SC instruments in use in the cities of Alvorada-RS, Blumenau-SC, Curitiba-PR, Florianópolis-SC, Niterói-RJ, and Porto Alegre-RS, in addition to the *Licença Onerosa* (LO) [Permit for a fee] of Goiânia-GO, the *Operação Urbana* (OP) [Urban Operation] of São Luís-MA, the *Contraprestação* [Payment] of Salvador-BA, the *Alteração de Índice e Alteração de Uso* [Change of Index and Change of Use] systems of the Negotiated Urban Development Law of Campo Grande-MS, and the OODC, also in Campo Grande.

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<sup>1</sup> According to results of the MUNIC (2001) survey, carried out by the Brazilian Institute of Geography and Statistics (IBGE).



The criterion adopted for inclusion in the research was basically that the instrument meets the basic design specified in the EC, regardless of the type of charge collected as payment for use of land utilization coefficients over and above the basic pre-established coefficients, up to the construction maximum also established by law.

One difficulty that so far has proved insurmountable is the lack of statistical base for analysis of the application of the instrument. With the exception of some reports on collections and revenues of the *Fundo Municipal de Desenvolvimento Urbano* (FMDU) [Municipal Urban Development Fund] and some materials pertaining to the city of Natal, data about the application of the OODC and its equivalent instruments (such as number of applications, year and location of projects, additional buildable area granted, fiscal values considered, amounts collected, etc.) are in general not available to researchers and in some cases perhaps not even to local planners.

The lack of statistical data probably results from the weak relationship that still exists between the Department of Urban Planning, which applies the instrument, and the Municipal Treasury, which in general collects the corresponding charge. The disconnection between these entities makes it enormously difficult to hold in-depth technical discussions on subjects vital for the development of the OODC, such as the level of collection and recovery of real estate valorization, the actual cost burden the charge represents in given projects, the effectiveness of the calculation formulas, etc.

This problem affects not only cities that do not have a database, but all the other cities, since, as we shall see, the homogenization of concepts and criteria and technical exchanges based on experience are an indispensable condition for strengthening of the OODC at the national level.

## **B. Principal characteristics of the municipal experiences studied**

To facilitate the evaluation of the principal characteristics of the OODC in the twelve cases studied, we prepared a summary of the experience of each city, in the form of reports that contemplate the following general topics:

- i. Legal form of the instrument
- ii. Design of the instrument
- iii. Objectives
- iv. Application date
- v. Land utilization indices
- vi. Territorial extension
- vii. Formula for calculating the charge
- viii. Use of the revenues collected

- ix. Social-interest monitoring
- x. Effects on the price of land and the real estate property tax
- xi. The instrument and recovery of incremental land values

In addition, we left space in the report for general comments explaining specific aspects of the functioning of the instrument. The reports prepared are presented in Appendix 1.

### **C. Comparative evaluation of municipal experiences: General overview**

From inception, the development of this research project was marked by a series of findings that merit discussion. The first pertinent item of evidence surfaced in the process of selecting the cities for in-depth study. After consultations of various types, it became clear that there were far fewer experiences of OODC application appropriate for investigation than we had hoped. This may be due in part to the still-recent promulgation of the EC, since in many cities the Urban Development Plan (PDDU), which in general contains the bases for the establishment of the OODC, is now in the process of approval<sup>2</sup> or revision for adaptation to the requirements of the EC.

In addition, it seems that many of the major Brazilian cities face difficulties in implementing the OODC. Rio de Janeiro, São Paulo, Recife, Fortaleza, Belem, and even Belo Horizonte do not yet have relevant experience in the use of the instrument, although in some cases it is specified and even regulated in municipal legislation.

A substantial proportion of the actual experiences are concentrated in the southern region, possibly a reflection of long-standing traditions of municipal autonomy that characterizes that region. This is obvious from the strong representation of these cities in our selection (Porto Alegre, Curitiba, Florianópolis, Blumenau, Alvorada). Other experiences are found in capitals and in cities experiencing accelerated growth or undergoing profound changes.

Another pertinent observation that can be made from a quick comparison of the cities is the greatly diversified application of the OODC. Experiences range from a case in which no urban development objective was assigned to the OODC, to a case in which the instrument was given a strong urban-development and redistributive focus while also playing a role in modifying the pattern of urban density.

In the final analysis, among the cases studied there does not appear to be a model case or one single model for application of the OODC. Although some experiences are clearly or even explicitly derived from models already implemented, others bear unmistakable signs of creation of specific models. Thus both positive and negative experiences can be found in all the cases analyzed, and these are well distributed. The experiences make evident the many possible alternative ways of interpreting the scope and the possibilities of the OODC.

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<sup>2</sup> The Statute of the City establishes a period of five years from its effective date (10 October 2001) for approval of the Urban Development Plan in cities that do not have such plan. In other words, a PDDU is now mandatory for every city of more than 20,000 inhabitants..

This finding is reinforced by the fact that many experiences were developed before the EC went into effect.

Comparative evaluation of the municipal experiences by means of analysis of the criteria that delimit the specific forms of application of the OODC thus appeared to be the most productive method. For this analysis, the following factors were taken into account:

- The principal characteristics of the instrument, with particular attention to the criteria expressly cited in the EC, i.e. indices, calculation formula, charge, intended use of the funds;
- The definition and objectives of the instrument, taking into account how it is perceived and used by the municipality, and its relationship with other instruments of municipal action; and
- The evolution and current situation of the OODC, including its actual utilization, as well as that of other instruments, reactions by the parties involved, and current revision initiatives.

### **Bases for a comparative evaluation**

In order to standardize the evaluation criteria, a questionnaire was prepared based on the review of the experiences researched, so that the answers, filled in by the researchers, would offer a basis for a comparative overview of how the OODC was adopted and implemented in the municipalities studied. The complete individual answers were organized into comparative summary tables that permit a rapid general view and which in turn are further analyzed (see Appendix 2).

To permit the best monitoring of the parameters used for the comparative evaluation, we reproduce below the summary questionnaire and the summary tables of the answers.

## **D. Comparative evaluation of municipal experiences**

### **Construction indices**

This initial section introduces a problem often encountered in the application of the OODC in cities: the establishment of construction indices and more specifically, the coefficients of land utilization, as established in the EC (i.e. the relationship between the buildable area and the land area, cf. Article 28 [1] of the EC). Many of the questions relative to the understanding of the potential of the instrument and its role in urban policy, as well as reactions to implementation of the OODC and similar instruments, pertain to the establishment of such indices.

In relation to the basic indices (coefficients of utilization), the first aspect worthy of note is that the universe of study is not homogeneous; there is no model for the establishment of indices. Most of the cities have a variety of basic indices applicable in different areas, and in general the indices are higher in the more central areas. The basic indices range, roughly, between 1.0 and 3.0. Three of the twelve cities have a single basic index; in two of them the index is also equal to one (Florianópolis and Goiânia) and in Natal it is equal to 1.8. It

was not possible to deduct from the interview materials any direct relationship between the type of index adopted (single or differentiated basic utilization coefficient, as authorized by the EC) and an underlying ethical or social principle.

Furthermore, it is important to remember that changing previously allocated indices represents a political burden. This is apparent in the fact that in several cities the indices established in prior zoning laws were the ones adopted as basic. Symptomatically, in the two cities in which the basic coefficient was established as single and equal to one (1.0), the OODC was named “remuneration rate” (Florianoópolis) and “permit for a fee” (Goiania). As for the cities with several basic coefficients, only three reported changing prior indices when the OODC was introduced.

The maximum indices, in all cases, are also variable, ranging from a minimum of 3.0 (Porto Alegre) to a more frequently encountered maximum of 6.0 (Campo Grande, Curitiba, and Salvador), and exceptionally even 7.5 in the case of Niterói. Often the maximum indices are combined with other construction parameters, such as the occupancy rate and the volumetric features of the building. When we analyze the experiences more closely, we see in some cases a relationship between variable (or previous) and maximum basic utilization coefficients in each area. In some cases this relationship is fixed. In Campo Grande, the utilization coefficient for specific areas can be doubled, while in Blumenau the increase can be up to 30 percent.

The EC defines as the base to establish the maximum utilization coefficient as a proportional relation between the existing infrastructure and the increase in density expected from the application of the OODC. Such proportional relation appears only indirectly in the twelve cities studied. There are even cases in which the establishment of the OODC is associated with the financing of planned infrastructure.

The determination of the charge to be paid by the developer in exchange for permission to change land use appears in two cities (Salvador and Campo Grande) where this eventuality is regulated by law. But we did not make a detailed study to determine if this regulation functions effectively, since the question lies outside the scope of this study. The question of land use is interesting, and in fact deserves a separate study. There are cases in which the OODC does not affect residential use (possibly because of a misunderstanding of the instrument as a charge on the end buyer). In Curitiba the instrument is already been used exclusively for residential (and hotels) use, as an incentive to promote high-rise construction, although there is a variable adjustment factor in the formula used to calculate the grant.

### **Calculation formulas**

There is a surprising variety of components used to calculate the OODC charge. More simple and direct calculation formulas appear side by side with formulas that are complex and sometimes difficult to understand. The analysis of the formulas to calculate the OODC charge should start with a distinction between two basic situations: use and intensity of use. These terms refer, respectively, to the quality and the quantity of economic exploitation of land.

There are few cities that specify the charge for changing land use. Among the cities that we studied, such is the case of Campo Grande and Salvador. Both establish the charge as a percentage of the value of the property in question. In Salvador the charge is 50 percent of the original value of the property and in the case of Campo Grande it is 70 percent of the land valorization, i.e. the difference between the original value of the property and the new value.

With respect to charges for change in intensity of utilization, the dominant trend is the reinforcement of formulas based on the value of the property, even though formulas to calculate the charge based on construction cost have already been in use for some time (as in Florianópolis and Natal). It is important to emphasize, however, that the property value considered varies significantly. Ten cities analyzed here use the value of the property as the basis for calculation, but five of these use the fiscal value. That is, the assessed value established in the municipal tax maps, which, as is well known, is usually quite out of date. Three cities (Blumenau, Campo Grande, and Salvador) reported the use market values. And two (Porto Alegre and São Luis) use figures calculated specifically for the launch of the OODC, in both cases based on market prices.

However, a given recognized value of the property does not immediately establish the amount of the charge. Most of the calculation formulas introduce other factors that we call corrections (included in the calculation formula itself), adjustments (depending on uses, types of grant or charge), or reductions (generally negotiated politically). In addition, some cities incorporate progressiveness criteria into the calculation, so that the charge to be paid per additional square meter of construction is higher the closer it comes to the maximum authorized utilization coefficient (as in Alvorada, Florianópolis, and Niterói).

Another way to calculate the charge is the weighting of the value of the property in relation to its construction potential prior to the grant request. This approach is based on the fact that the value of property is determined in part by its potential use and exploitation capacity (in addition to other factors generally external to the value). In other words, if we consider two properties identical in terms of location, accessibility, neighborhood, and access to amenities, the difference between their prices will in large part reflect different expectations of the potential left to be exploited.

The analysis of our data on 12 cities regarding the logic behind the calculation formulas reveals the existence of three basic types:

- i. Formulas that calculate the charge as a percentage of the construction cost per additional square meter to be built, using as a basis the *Custo Unitário Básico* (CUB) [Basic Unit Construction Cost for civil construction]. These percentages are quite low: in Natal it is 1 percent, in Florianópolis it is a progressive percentage rising from 1 to 4 percent. In practice, these percentages are similar to a building permit fee, and are even recognized as such;
- ii. Formulas that are based on the idea of the virtual property that would be necessary in order to accommodate the additional built area. For this purpose, these formulas use as base the ratio of the value of the property to its basic coefficient, with the value being that of a virtual property with an utilization coefficient equal to one.

The charge is then calculated and subsequently multiplied by the additional construction potential being granted. Blumenau, Curitiba, Porto Alegre, Salvador, and São Luis use this method;

- iii. Formulas based simply on the product of the full value of the property multiplied by the additional building potential to be acquired. These formulas are in general balanced by factors that tend to reduce the charges, as in the cases of Niterói and
- iv. or they ultimately incorporate politically negotiated reduction factors, as in the cases of Alvorada and Goiânia.

Mention should be made of the exception found in Campo Grande. That city establishes rules to calculate the charge for changing the land use and also uses formulas differentiated according to various types of OODC. One formula falls within type 3 above, but it does not contain reduction factors. It is used in the case of the “*Outorga da Construção*,” the building permit, i.e. the building permit that legalizes buildings that are in violation of current regulations in exchange for a fee. This type of formula is often used in Campo Grande.

The second formula found in Campo Grande is the change of indices method. That formula is similar to the change-of-land use method in that it also uses the perceived valorization of the property as base for calculation. In this case, the charge is calculated as equal to 50 percent of the difference between the market prices of the property with the basic coefficient and the value with the increased coefficient. Although this formula is in theory the one that best represents the incremental value created by the additional building potential that results from the OODC, it is difficult to implement.

In general, we find that the various calculation formulas and the corresponding charges are approximations which are often at odds with the price increases of the properties resulting from urban development changes. But on the other hand they are viable procedures, from the point of view of both the practical possibilities of implementation by local governments and the economic and political opportunities they offer for strengthening the principle of the OODC.

### **Use of OODC funds**

The funds obtained from OODC have normally been used for redistributive public investments, with priority being given to needy areas of the city. Some cities channel the entire amount into specific investments, such as low-income housing (Curitiba) or urban and community facilities (Blumenau and São Luis). Other cities use a portion of these revenues for this purpose, as in the cases of Niterói (a minimum of 30 percent obligatory for special social-interest areas) and Campo Grande (where the law requires the transfer of a minimum of 10 percent of the total charge revenues to the *Fundo de Habitação* (FUNDHAB) [Housing Fund] for the production of housing units and lots for residents of the slum districts). However, the vast majority of the cities studied adopt broader and more diverse social investment options, such as programs in areas of social-interest, basic sanitation, tenure legalization, creation and preservation of green areas, preservation of cultural assets, and development of slum districts and other districts, in conformity with the

guidelines established by the EC. In the case of Goiânia, the law broadly defines the use of OODC revenues to finance projects, including the studies required for their execution.

Some of the cities studied merit special comment. Florianópolis does not use OODC funds for purposes specified by law but deposits the revenues in the municipal treasury and does not engage in subsequent monitoring. Porto Alegre uses the funds to supplement the general municipal budget, on the theory that since the budget is prepared through a participatory budget process and therefore the allocations of funds is already agreed upon with the people. Alvorada reports that it has not had occasion to use OODC funds because the amount collected thus far is too small. Natal also has not used OODC funds to date (approximately two billion *Reais*). Lastly, Campo Grande does not establish a purpose for the use of OODC funds except for 10 percent ear-marked for FUNDHAB, mentioned earlier.

In practice, despite the categorical limitation represented by the volume of funds collected, which in general is considered quite modest by the governments themselves, most of the cities studied have tried to comply with the provisions of the EC (ref. guideline X), by using OODC funds for redistributive purposes in order to remedy shortfalls in urban community facilities, housing, and infrastructure in low-income areas.

#### Management of OODC funds

The existence of the FMDU is an indispensable condition for the OODC to meet urban policy guidelines IX and X established in the EC:

“IX – Distribute equitably the benefits and costs resulting from the urban development process;

X – Adapt the instruments of economic, fiscal, and financial policy, and public expenditures to the urban development objectives, in such a way as to give preference to investments that lead to the general welfare and use the assets for the benefit of society as a whole.”

Unlike the real estate property tax revenue, which constitutes an unallocated budget resource, the application of the OODC funds is connected, via FMDU, to the goals established in Article 26 (I-IX) of the EC:

- i. Real estate tenure legalization;
- ii. Execution of social-interest housing programs and projects;
- iii. Establishment of an urban land reserve;
- iv. Organization and management of the urban territory;
- v. Installation of urban and community facilities;
- vi. Creation of public spaces for leisure activities and green areas;

- vii. Creation of conservation or protection districts in other areas of environment interest;
- viii. Protection of areas that are of historical, cultural, or landscape interest.

Thus, the FMDU functions as a special account which facilitates the ultimate use of funds for the purposes specified in the EC, preventing them from going into the general municipal treasury to be managed as part of the general budget.

Most of the municipalities studied have an FMDU where OODC revenues are deposited. This is the case for Alvorada, Blumenau, Curitiba, Goiânia, Natal, and Niterói. Salvador and Santo André which use the funds for the purposes specified in the EC. In Campo Grande the law requires that 10 percent of the OODC funds collected through the method of “Change of utilization index and land use” (not collected thus far), be used for low-cost housing via a specific fund. However, such requirement does not apply in the case of the “building permit for a fee” where OODC funds are collected upon issuance of the building permit. Porto Alegre and São Luis do not have a FMDU, but they do implement the type of use specified in the EC via the participatory budget and through specific legislation, respectively. In Florianópolis, the funds go directly into municipal treasury, since the *Fundo Municipal de Integração Social* (Municipal Social Integration Fund, established by Law No. 3338/89) and the *Fundo de Obras Urbanas* (Urban Works Fund, established by Law LC 01/97) were created by law but never implemented.

Some funds clearly contribute to foster technical urban management by designating the projects that are to receive the funds, as in the case of Curitiba, Goiânia, and Niterói.

Moreover, the existence of the FMDU appears to lead to greater transparency in the financial applications and end use of OODC revenues, as they are generally linked to forms of monitoring established by consulting councils. This occurs in Niterói, Curitiba, Goiânia, Blumenau, Campo Grande, and Alvorada. Consulting councils or commissions, provide opportunities for greater social-interest control. However, such councils also exist in cities that do not have a FMDU, as for example in São Luis and Porto Alegre.

Generally, it can be said that the OODC/FMDU combination is a redistributive method for managing the revenues from real estate property valorization that is already fairly well rooted in Brazil. It is part of many municipal Master Plans.

### **Control of OODC funds**

Most of the cities studied adopt some social-interest control mechanism to monitor the use of OODC funds. Normally control is exercised by a Municipal Urban Development Council or similar entity. Although it is difficult to confirm the effectiveness of the social-interest control exercised through such councils, a desire to do so does exist when the councils are formally established.

Florianópolis is an exception to this rule. It has no mechanism for social-interest control either of the application of the OODC instrument or the management of OODC revenues. In Natal there is a Municipal Urban Planning and Environment Protection Council, but



there are indications of defects in its operation, since the OODC revenues from 1995 to 2004 have yet to be allocated and the city does not comply with the requirement to establish in the Master Plan that a funds-allocation-plan should be presented each year to the approval of the Municipal Legislative Chamber. In São Luis, the Municipal Commission exercises veto power when the application of the instrument (established as Urban Operations) is not recommended by the required studies that condition its approval, and the municipality discloses the allocation of the revenues in reports published in newspapers. In Goiânia, the FMDU resources are managed by the *Conselho Municipal de Política Urbana* (COMPUR) [Municipal Urban Policy Council], which has 32 members and is composed of representatives of public and social agencies, and has the responsibility for approving the plans and the reports on the allocation of revenues.

### **Level of OODC collections**

The small amount of funds collected from application of the instrument is a recurring problem found in almost all the municipalities studied. We mentioned earlier that the unimpressive financial results constitute a potential danger to the continued use of the instruments by the municipalities, since it is a disincentive. But the contrary seems to happen in practice. Despite its modest financial result, the OODC is valued by the municipalities as a source of funding directly applicable to urban improvements, and it is seen as needing to be perfected to improve its performance.

Various factors contribute to the low revenues. The first is the form the instrument is applied; especially the exemptions or uses to which it does not apply. In several municipalities, the OODC is applied only to large-scale residential developments, and excludes businesses and services investments. This occurs in Curitiba, Goiânia, and São Luis. In Niterói, there is an exemption for hotel operation.

Reductions are another factor which is generally introduced into the calculation formula at the time of approval of the instrument as a way of making it acceptable to real estate investors, contractors and property owners. Examples include Goiânia (initial deflator of 0.025, rising to 0.2 starting in 1998), Natal (1 percent of the project budget), Curitiba (correction factor of 0.75 for grant of coefficient and 0.15 for grant additional stories), Florianópolis (remuneration rate ranging from 1 to 4 percent of the CUB), and Santo André (planning index set at 0.3 for the first two years of application, 0.4 thereafter).

The calculation formula based on the fiscal value of properties is another factor that contributes to the low revenues. It should be kept in mind that the property assessment schedules of the Municipalities are traditionally outdated in relation to the market prices. Here it should be mentioned that the municipalities of São Luis and Porto Alegre have begun publishing a periodical updated schedule of property values specifically for purposes of application of the OODC. However, various municipalities, including Goiânia, Curitiba, Santo André, Alvorada, Campo Grande, and Niterói, calculate the charge based on schedules of fiscal values.

Finally, the small difference between the basic and the maximum utilization indices contributes decisively to the problem of low revenues. This practice was introduced as a way to mitigate negative reactions to the instrument in the debate that takes place during

the approval process. In these negotiations, the municipalities tend to establish or accept high basic coefficients, thereby giving property owners a significant building potential free of charge. While this concession helps to lessen resistance to the instrument, it unquestionably reduces the potential OODC revenue that can be collected. Municipalities in this situation include São Luis, Campo Grande, Niterói, Curitiba, Santo André, and Blumenau.

### **Political viability**

Despite the fact that municipalities are protected by the juridical power of the EC, they promote the application of the OODC in a relatively isolated manner, without the support of an appropriate level of technical and political interchange. For the most part, municipalities that apply OODC follow their own administrative traditions which include power relations with business operators and local landowners.

Given these conditions, we cannot ignore the argument that explains low OODC revenues as the unavoidable result of reduction factors negotiated in the Municipal Chambers, Planning Councils, and similar entities. The argument is that such outcome is inevitable in the current phase of policy development to capture incremental land values from urban real estate valorization in Brazil. But low revenues may be more than offset by the benefit of acceptance and strengthening the OODC.

It is reasonable to suppose that strengthening interchange and improving technical initiatives among users, combined with disclosure and dissemination of the fairness of the OODC principles and the efficacy of its application to finance social development programs and projects will produce a gradual increase in the average level of collections in the medium term, and result in a stronger instrument.

### **Effect of the OODC on the Real Estate Property Tax Base**

One of the principal recurrent finding from the interviews is the lack evaluation and of concern, on the part of the municipal administration, about the risk of reducing real estate property tax revenues as a result of a lower tax base (value of urban properties) associated with the OODC.

This lack of concern probably reflects a real lack of influence of the OODC on real estate values, or the difficulty of measuring its effect on property tax revenues. In the absence of systematic surveys, one can try to gauge this effect by studying the behavior of historic trends in property tax revenues. To orient further research, we propose a set of possible explanations for the seemingly disconnect between the OODC and the property tax base, as follows:

- i. The OODC applies only to new projects, resulting in a very small share of total municipal tax revenues. This effect is reinforced by the fact that a large proportion of the property tax applies to commercial buildings which are generally not affected by the OODC;
- ii. The OODC is very inexpensive, either because of the application of high planning, social-interest, or otherwise reduced coefficients (which together could be called

political viability coefficients); or because of the enormous lag in updating the generic property assessment schedules; or because the charges are calculated with formulas based on CUB. The resulting very low charges compared to the high profitability of land in the most valorized areas, would not offset holding-on to land in the face of an opportunity for a project;

- iii. The OODC is applied in a relatively small area (e.g. in Curitiba), with a view to recover part of the incremental land values created by public sector interventions with the specific goal of increasing density in a given urban corridor;
- iv. The OODC is applied in large geographical area, but the level of economic activity and the limits of the market do not encourage investment in a sufficient large scale to establish a model of land prices from which the OODC values are deducted;
- v. The formula to calculate the OODC charge or the collection system use planning coefficients applied on a case by case basis; this prevents or delays the incorporation of the land value reduction represented by the OODC by the real estate market.

### **The OODC and the Transfer of Building Rights (TDC)**

An unexpected situation observed in several of the cities studied is the negative effects of the overlap between the OODC and the TDC. Of the twelve cities studied, eleven make provisions for the TDC. The cumulative use of the two instruments and the lack of coordination of their use curtail the optimum utilization of both OODC and TDC.

The TDC has been in use in Salvador since 1987 under the name TRANSCON. However, since 1994 that city had provisions (“Contraprestação” or “Payment”) requiring payment of a fee in exchange for any additional building potential created by more permissive regulations than those in effect in 1990, when the Municipal Basic Charter was approved. The introduction of the OODC in the 2004 PPDU provoked strong reactions among holders of a large TRANSCON inventory. The conflict was resolved by postponing the implementation of OODC until the TRANSCON inventory was reduced by 20 percent of the total held at the time the PPDU was approved. This provision was formalized through Article 133 of the PPDU.

Florianópolis presents a unique situation, since the SC payment rate applies to any building potential above the unitary index, that is, the additional potential resulting from the SC and the TDC. Thus, the conflict in this case arises from the indiscriminate use of the TDC and not from competition between the two instruments. At the present time the TDC has been suspended for review, but the SC remains in effect and is accumulating a fairly strong experience in the city, with 17 years of uninterrupted application.

The TDC in Porto Alegre is used regularly, not only in demolition and preservation projects, but also as a bargaining chip used by the authorities in expropriations for the construction of major highways and for obtaining land for the installation of public parks. In Porto Alegre, although the initial situation is the same as that of Salvador (inception of SC in a scenario in which the TDC already had an important role), developments are different. The difference is that in Porto Alegre the acquisition of SC is contingent on a series of

restrictive factors (auctions of construction indices, connection with specific projects) while the TDC functions freely on the private market after the first public issue to benefit the owner of the affected building, and is usually sold by means of newspaper advertisements.

Consequently, the results of the experience with SC auctions in Porto Alegre between 2001 and 2003 were below expectations, and the auctions were ultimately suspended pending changes in the instrument, leaving only the direct acquisition method (used in cases of no-densification or adjustment) that is also experiencing diminishing returns. There are also problems caused by the possibilities of cumulative use of two instruments in the same building.

Goiânia is another city where the simultaneous and cumulative use of the two instruments has negative results. The effect noted is excessive high-raise development, caused by the absence of a link between the allocation processes of the two indices. Moreover, there is not a global evaluation or a case-by-case evaluation of the effects of overlapping of the use of the two instruments.

In Blumenau there is no interaction between the SC and the TDC, and the municipal legislation is not clear with respect to the criteria for application of the SC and the TDC. The legislation is currently scheduled for revision with respect to the two instruments.

Competition between SC and the TDC also exists in Curitiba. In this case, while the TDC is oriented more toward commercial uses, it can also be used for residential purposes even though that is the focus of the SC. As in Porto Alegre, interested parties have been more attracted by the possibility of acquiring building rights through TDC than through SC.

In some municipalities, such as Niteroi and Santo André, because the establishment of the OODC and the TDC is more recent, it is not yet possible to evaluate the effects of their combined use. In Natal, the TDC is part of the Master Plan, but since regulations have not yet been issued, in practice the city does not have that instrument. Of the twelve cities studied, only Alvorada has not legally adopted the TDC. Alvorada is part of the Porto Alegre Metropolitan Region, and prior knowledge of the problems created by simultaneous use of SC and the TDC in Porto Alegre contributed to the decision not to adopt the TDC.

Cities that are now revising their regulations are focusing on criteria for the combined use of the two instruments, that is, for their orientation toward specific uses and toward specific areas of the city. Some cities, for example Porto Alegre, are considering the possibility of limiting the annual issuance of TDCs. Despite obvious overlapping, no city is considering eliminating one of the two instruments to permit the full utilization of the other.

### **Negative Reactions to the OODC**

The reported cases of negative reactions and legal challenges to the OODC refer to cities that limit the maximum indices since the beginning of application of the instrument. The real estate market reacts when its practice is limited. Florianópolis, which instituted a single unitary index throughout the city in 1989, has a lengthy history of legal challenges to the application of SC. However, after numerous discussions between the public and private sectors, through persuasion of the private sector and no court ruling in its favor, the

instrument ceased to be the object of legal challenges, although a few real estate companies continue to deposit the charge with the Court instead of paying it directly to the municipality.

Goiânia also instituted a basic unitary index lower than the index permitted earlier. The city has had legal challenges to the calculation base for the charge (which is the same as the real estate property tax base), and because the instrument was initially launched as a rate then modified as a public charge.

Santo André reports strong confrontation between public and private interests in the process of drawing up the Master Plan that established the OODC. According to the municipal officials interviewed, on the one hand the private sector reacted, with full support of the local media, to a reduction in the maximum permitted indices. On the other hand, the community supported the establishment of the unitary index. A pact was reached whereby all the parties had to compromise a little. The municipality succeeded in reducing the maximum permitted indices, along with the payment of the charge, but it did not succeed in setting a single basic unitary index, as originally planned.

Experience thus shows that market reactions and potential legal challenges can be overcome. The municipalities that face them have succeeded in establishing a positive position with respect to the use of the instrument, and there are no cases of cancellation of OODC after its approval and regulation.

### **E. The Statute of the City and the Development of OODC Applications**

An analysis of OODC application in light of the national guidelines established in the EC is not easy because several municipalities established the instrument (or similar instruments, often called SC) before the publication of the EC. In these cases, subsequent adaptations retain some defect of origin (such as the absence of a specific Fund, in Florianópolis and Porto Alegre, definitely contrary to the EC), or are incomplete, as in Curitiba, Blumenau, and São Luis where the instrument was introduced before the EC.

In a certain sense, the OODC concept lacks solidity. It lacks a common base that would facilitate homogenization of its contents across municipalities. In establishing general guidelines for application of the OODC, the EC created the possibility of fragmentation in its application. On the one hand, this is desirable from a practical point of view as it allows for flexibility and for adaptation to local interests and conditions and prevents the hardening of the instrument by means of legislation. On the other hand, if the concept of the instrument is not firmly established there is a risk of applications that are too disparate. The application can and should be developed locally in terms of its details, as is advocated by the EC itself, but the municipalities lack a common denominator to help them understand the instrument.

The cities studied show that municipalities not only develop the application of the instrument in fairly local formats and that this is why they differ, but moreover they develop different concepts of the same instrument. In Florianópolis the OODC is understood as a simple fee (even after the publication of the EC). In Curitiba it is viewed as an instrument for urban reorganization and financing of social housing. In Santo André it is

conceived as a mechanism to create a new culture of urban development management based on improving the allocation of costs and benefits of the urban development process.

Some municipalities limit the rights of landowners by establishing basic OODC indices that are lower than the maximum previously permitted in local zoning regulations. In others the instrument is applied by awarding additional indices up to the maximum previously permitted by local zoning regulations. Thus there are two, very different strategies of public action for the use of the same instrument. We discuss below on some aspects that we consider important in view of the differing municipal strategies observed.

### **Strategies for the Introduction of Land Utilization Indices in the Municipal Legislation**

The strategy to introduce the basic index or coefficient while maintaining, reducing, or increasing the maximum indices formerly permitted by the city zoning laws is the single major issue in the introduction of OODC. The observed experiences show a wide variety of situations, some of them pointing in opposite directions.

There is a group of cities (e.g. Florianópolis and Goiânia) that maintain the maximum indices previously permitted and establish a basic index of 1.0 for the entire city, as the basis for the OODC charges. Considering the index, the strategy in these cases is to recover incremental land values to finance investments that will bring the infrastructure up to the level required by the zoning permitted. There is no negative impact on the zoning of the city, since it was preserved. From the practical point of view this strategy simplifies the application of the instrument. On the other hand, the establishment of a single unitary index is the measure that provokes most reactions and challenges from real estate market actors.

There is a second group of cities (e.g. Curitiba, Blumenau, and Campo Grande) that adopt as basic indices the maximum indices previously permitted, and permit granting additional indices for purposes of OODC. In these cases, the previous zoning becomes more flexible. In terms of the index, this strategy presupposes that the municipality will take responsibility for adjusting the infrastructure to the maximum land utilization permitted by the previous zoning, and the OODC charge is intended to recover investments or to finance the additional investment required by projects that exceed that maximum. Curitiba justifies its strategy by saying that it had already invested a great deal in infrastructure and in some areas the infrastructure is underutilized and can absorb this new impact. Blumenau, on the other hand, has difficulty attracting investors interested in acquiring additional building rights to the maximum previously permitted (already high in terms of demand). Campo Grande is using OODC primarily to legalize structures already built. It is not an accident that in these cities there were no negative reactions to the OODC from the real estate market.

The third group of cities comprises São Luis, Natal, Porto Alegre, Niteroi and Alvorada. These cities have kept the maximum indices previous permitted and added basic indices that vary according to city zone. This is an intermediate situation in which the existing zoning is preserved and variable basic indices are introduced. In terms of the index, the strategy is to recover the investments or finance the infrastructure necessary for

implementation of local zoning selectively, stimulating or restricting additional land utilization in specified areas of the city.

Santo André is an exception to the foregoing cases. It approved the introduction of the OODC to revise its maximum use coefficients, reducing them in some cases, maintaining them in other cases, and increasing them in specific areas of the city. The basic coefficients introduced are variable, but a large part of the city, even with the OODC, has access to maximum indices that are below the maximums permitted before the OODC. The justification is that these indices were incompatible with what is currently desired for the built environment of the city.

#### **F. Evaluation of Parameters for the Use of the OODC**

Although the OODC is formally introduced in the Brazilian legislation as an instrument of urban policy in 2001, via the EC, its bases date from the 1970s. Both the name and the contents of the SC—the instrument that was originally created, evolved into the OODC concept as defined in Federal Law No. 10 257/2001 as early as the 1990s..

To retrace the route of the theoretical construction of the OODC and the discussion of its possible use, we refer to a detailed review of the pertinent literature produced during the 1970s, 1980s, and 1990s. Here we emphasize the principal questions related to the reasons, objectives, and bases for the application of the instrument that transpired during these three decades of development of the ideas that guided the design of the OODC.

First, we should mention the essential points of legal doctrine and legal discussion concerning the constitutionality of the instrument with respect to: (a) at least partial separation between ownership rights and building rights; (b) the nature of the instrument; and (c) the possibility of it being established by the municipalities in the absence of federal regulations. These issues were resolved with the approval of the EC.

In the list of justifications presented during those decades, and which today open a wide range of alternatives for the application of the instrument, the following stand out in particular:

- i. To restore urban balance, chiefly between public services and goods on the one hand and demand resulting from the process of increasing density on the other. This justification for the OODC contemplates the need for open areas to offset the effects of urban development and the donations in land and payments already made in instances of land subdivision;
- ii. To recover land valorization that benefits some owners more than others and that results primarily from the regulations governing land use and occupation and from public investments, justifying mechanisms that recover this valorization for the community;
- iii. To promote social equity by ensuring equality of building rights. This justification addresses the question of social justice, and makes the instrument a tool for

redistribution of real estate profits, by proposing equitable distribution of the costs and benefits of public investments;

- iv. To generate funds in the form of compensation for building rights to finance social housing and neighborhood development programs, compensating for the lack of public funds for such programs;
- v. To subordinate private economic power to the public interest of the community and to make compatible the right of ownership with the social function of property;
- vi. To normalize the basis for urban land prices and to provide a mechanism to regulate the real estate market.

The study of the twelve cities shows that justifications for OODC cluster around the possibility of generating revenues for social-interest purposes, with some incursion in guaranteeing the social function of property. Most municipalities studied have a vision of the possibilities and functions of the instrument that is more pragmatic than philosophical. The municipalities of Goiânia, São Luis, Campo Grande, Curitiba, Porto Alegre, Blumenau, and Niterói supported the adoption of the instrument for purposes of generating revenues for social purposes. Alvorada and Natal emphasized guaranteeing the social function of property, at least officially, while only Santo André reported as primary justification for the OODC the recovery of incremental land values resulting from public interventions.

Since the use of the OODC as an instrument for obtaining funds for social-interest purposes is the principal justification given by municipalities, it is worth while to highlight the ways municipalities conceive the social-interest:

- i. The instrument will provide land for the public sector, or funds that can be allocated to the acquisition of land, with which the government will be able to encourage the development of low-cost housing;
- ii. The instrument will provide additional funds that can be used to finance infrastructure projects, a general necessity in the outlying areas of the city;
- iii. The instrument can create conditions for low-income groups to live in areas that are part of the urban fabric and not just in outlying areas devoid of urban facilities.

We note in these three sets of social-interest objectives various areas of implementation for the instrument, each oriented more strongly toward one of the principal foci diagnosed as being a central to the “urban question” at that time. In the first case—obtaining land—suggests action intended to combat speculation, understood as speculative holding of urban properties. Inventories of lands and progressive taxation would be part of a group of instruments dedicated to leveraging access to land and controlling land scarcity in the social interest. In the second case—financing infrastructure—the instrument is intended as a way of offsetting the “urbanized centers vs. un-served outlying areas” a typical model of urban development in Brazil, by proposing the socio-spatial transfer of income without, however, modifying the bases of this model. The third group takes on a normative stance and focuses more broadly on socio-spatial segregation, although in a less objective way.



The experience of the twelve municipalities studied show that the second group of objectives (to generate funds for infrastructure with social-interest purposes) is the one that prevails in most municipalities, and it is also the preferred OODC objective in the EC. The first set of objectives appears to be complementary in some cases, and sometimes is incorporated as permanent instrument of the Municipal Master Plan. The third set of objectives is not easily conciliated with any of the new instruments proposed by the EC.

As for the restoration of urban balance based on donation of compensatory land areas, it is noted that the EC distanced itself from this justification when defining the OODC. Additionally, although this function was part of the original justification for the establishment of SC, and stimulated the first steps in its establishment, it is not present in cases studied even though most of them were developed before the EC.

Consistently, the payment of charges in the form of land transfers is perceived as a less a desirable option compared to the alternative of compensation in cash. The experience of the municipalities studied shows that the cash alternative is the most viable over time. Although in half of the cases land transfers appear as an acceptable mode of payment, there is no record of actual use of this option. Payment in the form of civil works is adopted in the municipality of São Luis as the principal form of charge payment, and in Goiânia and Salvador it is a supplemental form of payment of OODC charges.

In the debate about the bases of application of the OODC there were several questions that surface recurrently in articles and at seminars. In an early phase, the principal issue that was considered as a core element of the OODC concept had to do with the need to establish a single basic index for the granting of building rights free of charge. The single basic index appeared in almost all the laws that established the SC. At that time there was little acceptance of the idea that different basic indices could be established in the same city, as later adopted in the EC. However, the analysis the cities studied reveals that most of them adopted different basic indices, a fact that to a certain extent gives the OODC a character that is different from the original concept of the SC. Only three of the twelve cities in this study establish a single index for the entire urban area.

Additionally, the adoption of a single basic coefficient equal to one also constituted for many people a pillar of the instrument. The argument was that the SC would not exist below the coefficient equal to one. This would guarantee the economic content of the property rights and also foster the urban development objective of ensuring quality of life and the rational use of urban infrastructure. Above this unitary coefficient, the creation of additional building rights would interfere with the community interest, and therefore it should be regulated by the government. Among the municipalities studied, only Florianópolis and Goiânia adopted a single land utilization coefficient equal to one.

The possible consequences of the application of the OODC were part of the debate surrounding its design, and some consequences were considered goals of the instrument. Among the desired results, the stabilization of land prices, or the reduction of excessive valorization of urban real estate property was a central element in the debate regarding urban land in the 1970s and 1980s. On this point, there was quasi-unanimous agreement among researchers that OODC would have positive consequences on land value in the long

term. The opinions to the contrary were influenced by class interests, and consisted chiefly in the argument that the OODC charge would be transferred to the final price of the housing units.

However, we found no evidence in the municipalities studied concerning the effects of the instrument on real estate prices in the areas where it was used. This finding can be explained by the difficulties in the technical management of the instrument and the lack of monitoring of real estate dynamics, combined with other factors such as the small amount of money collected from OODC charges. These factors appear to contribute to the lack of interest or even ignorance of the links between the OODC and real estate prices.

### **OODC as Fiscal or Urban Instrument**

One of the questions that came up in the debate on the OODC in connection with the *Gestão Social da Valorização da Terra* (GESVAT) [Program of Social Management of Land Value) was how to define the principal objective of the instrument, namely, whether its objective was primarily fiscal or developmental. The debate tended to position economists on one side and urban planners on the other, while jurists were divided. The economists argued that the instrument should be neutral in relation to the urban development goals desired and regulated for cities. The urban planners in general saw it as an opportunity to contribute to urban reorganization.

The persistence of this question in the academic debate led to inclusion in the interview guide used in this study of questions aimed at evaluating how the issue was understood in every-day public-administration practice. The results are surprising; particularly because urban planners and urban development secretaries are generally those who manage the application of the OODC in the municipalities. Of the twelve cities studied, eight report using OODC primarily for fiscal purposes, while the other four aligned urban development objectives with increased revenues. The cities that assigned urban development objectives to the OODC were for the most part those that have regulated the instrument most recently, i.e. have done so after the EC went into effect. The only exception is Curitiba, which pioneered the establishment of OODC as an urban development instrument.

Although some cities try to apply the instrument to orient or organize urban growth, promote use of the areas provided with good infrastructure, and reorient urban densification, in general when this happens, how OODC affects land occupancy are not very clear to the municipal administration. Most of the time, not even the development intention is present, and the instrument functions exclusively as a mechanism to generate revenues from real estate valorization, but without attempting to impact on real estate market trends. To put it more clearly, the OODC is usually applied where there is already an expectation of valorization.

Another surprising finding associated with the OODC goals as perceived by municipalities, is the fact that although the chief objective seems to be fiscal, rarely the municipal administration foresees or provides for rigorous control of OODC revenues. Still less often do they carry out studies or evaluations on the allocation of the revenues.

A more careful evaluation of the specific ways in which the OODC is applied shows that some parameters present in the design of the instrument can help give it an urban-development orientation. In fact, the OODC serves as incentive to discourage densification, high-rise building trends, land use changes, or to relocate these trends toward predetermined urban areas or corridors. This can be done through establishment of progressive level for calculation of the charge, by means of deliberately avoiding the use of the OODC in certain areas of the city, or by making adjustment for densification, high-rise development, and change in land use.

Strangely, however, none of these parameters is exclusive to the cities that report an urban-development goal in the application of OODC. More generally, it is not clear what the real functions of the instrument are, or the extent to which these functions are part of the urban-development goal. Thus, we must recognize that the evaluation of these twelve cases has not provided new insights in the debate on this question.

### **Adaptation to the Statute of the City**

Since the approval of the EC, there were initiatives to revise the legislation that define the OODC in almost all municipalities studied. However, these initiatives are apparently oriented more toward seizing the opportunity to correct unexpected effects and inadequate results of the application of the instrument, than toward adapting municipal regulations to the provisions of the EC. This reflects the full spectrum of possibilities of interpretation offered by the EC for implementation of the OODC.

The cases of Florianópolis and Porto Alegre are worth mentioning regarding this issue. Neither municipality plans to revise its legislation, notwithstanding the profound differences in the way in which these cities apply the ideas of the SC. Practically, all the OODC parameters differ from those of SC, and sometimes are diametrically opposed. Discrepancies can be observed in the conceptual basis, the establishment of indices, the calculation formula and its value base, and even in the understanding of the nature of the instrument and its goals. The experiences of these two cities are difficult to compare, yet in both cases the local officials understand that what is in place already complies with the guidelines of the EC, albeit the observed incongruities.

On the other hand, the cities that had already revised the OODC legislation or approved regulations after the EC went into effect (e.g. Alvorada, Niterói, and Santo André) also present significant differences compared to the EC guidelines, although not as much as those mentioned above. These three cities use variable basic indices, full values of the properties to calculate (rather than values weighted by the previous utilization index) and assessed fiscal value as base, all parameters that are important in the establishment of the OODC in each municipality.

These findings suggest that a revision of parameters, or initiatives that lead to greater standardization of the instrument, seem necessary to significantly increase the number of cities that apply the OODC in accordance with EC guidelines.

## **G. Problems in Establishing the Instrument**

The process of applying the OODC in the municipalities studied is unquestionably characterized by difficulties related to the concept, interpretations, management, and the results obtained from the instrument. Although there are positive aspects in several municipal experiences, this tends to be a process where negative aspects are recognized and considered by local technical staff, pointing to necessary adjustments to be made to the Master Plan. Nonetheless, it seems unquestionable that the OODC has contributed to strengthen a set of urban management instruments that enables the municipal government to effectively promote a reduction of land use inequalities.

The contribution made by the OODC to urban development culture in general seems clear, at least in terms of the introduction of social justice objectives applied territorially. That is so despite the weak relationship perceived by municipal officials between the application of the OODC and the recovery of incremental land values, compared with other and more apparent complementary relationships such as obtaining private sector funds to pursue social-interest goals. Moreover, the discussions, problem identification, and the attempts at improvement seen among municipal teams appear to contribute not only to an understanding of the dynamics of the use of property rights by private agents but also to an understanding of the possible forms of public sector participation in this dynamic.

### **Effects of the OODC on the Environment**

In some areas where OODC was used there were negative environmental effects that can be attributed to the application of the instrument, whether due to excessive increase in density with consequent saturation of services (particularly sanitation services) or because of an increase in high-rise buildings with consequent change in the original profile of neighborhoods. In these situations there is evidence of a loss of environmental quality that is often associated with application of the OODC. To various degrees this can be observed in Natal, Niterói, Goiânia, Curitiba, Salvador, Porto Alegre, and Florianópolis.

Further study of the environmental impact of OODC allow us to see that the urban framework provided by the maximum coefficients permitted in these cities and approved by Master Plans or zoning laws, contributes to the negative effects on the environment. Because the approval of these excessive indices eventually coincides with the introduction of the OODC, there is confusion in attributing causality even though these instruments have different objectives and designs. Nevertheless, we cannot fail to recognize that in the municipalities where the application of OODC permitted increases in maximum building height or total area developed, or even where the maximum indices were set above the existing maximum, the indices now accepted for the OODC are indeed the cause of the negative environmental impacts and the non-application of the OODC in these areas would have avoided such impacts.

### **Adoption of a Single Index**

The experience of Florianópolis shows that application of the single index equal to one to the entire urban area, although difficult in terms of obtaining approval, greatly simplifies the OODC application. In such case there are no intra-urban boundary effects, there are no

variable (and not always objective) criteria with respect to the establishment of various basic coefficients in different areas of the city, and there is no undesirable competition between the OODC and the TDC, since the OODC also affects the TDC if the TDC increases building potential beyond index 1.

The adoption of the single index responds to a basic question that goes back to the first discussions about the SC, i.e. the injustice of distributing different land utilization coefficients free of charge benefiting some landowners to the detriment of others. One interpretation is that an egalitarian treatment accorded to the basic land use index helps the acceptance of the instrument, since it treats all parcels, and consequently their owners, in the same way.

Among the cities studied, only Florianópolis and Goiânia adopt the basic land use index of 1.0, and Goiânia applies it only for multi-family residential use. Many cities, however, report frustrated attempts to adopt the unitary index. For instance Natal, now revising its PDDU, proposes the basic unitary coefficient for residential use. However, the mere adoption of a basic single index equal to one does not necessarily guarantee ideal conditions for the application of the OODC. This is apparent in the experience of Florianópolis where OODC is applied without the indispensable social-interest control of the revenues obtained and also because the city uses the cost of construction as its calculation base in conflict with the guidelines established by the EC. It is thus clear that while the single unitary index introduces a measure of simplicity and transparency that contributes for the better understanding of the fundamental principles of OODC, other elements must also be in place for the proper use of the instrument.

### **The Problem of the Private Coefficients**

As we have already seen, in some cases the OODC was introduced as a charge for the use of higher coefficients over and above the pre-existing maximum coefficients. This is, typically the case of Curitiba, Porto Alegre, and Salvador. Similarly, Campo Grande applies the OODC for buildings that exceed the maximum pre-existing coefficients, reinterpreted as basic, although the city does not have a basic index.

The conversion of traditional maximums into basic coefficients for the purposes of OODC application appears to be a potential serious departure from the concept, even though some analysts theoretically support the idea and it is accepted in Porto Alegre. But in fact this practice is equivalent to defining the basic coefficient as a private coefficient, an acquired right of the landowner to build. If this concept were to become generalized to all cities that apply the OODC, a significant number of TDC could already be considered completely private property. Even more serious, the legislation could never again be changed, except for the adoption of even higher coefficients.

On the other hand, in cities that have not yet considered applying the OODC, or where application is deemed inappropriate or unnecessary (the immense majority, including regional metropolises such as Belo Horizonte and Recife), there would be no stock of building rights in private hands. Instead, the traditional understanding that building coefficients are an entitlement of the property rights that cannot be deemed acquired would

prevail. Consequently, a municipality would not be able to change coefficients for reasons of public interest without paying compensation to landowners.

Thus there is a potential conflict in the interpretation of the relationship between the property right and the right to build in Brazilian cities that deserves special attention from jurists and students of urban development in general.

### **OODC and TDC as Competing or Complementary Instruments**

The use of the TDC in combination with the OODC does not occur without conflicts, and in some cases there is competition between the two instruments. In some cities, the TDC is seen as “stealing” the market for the application of the OODC. In others, the combined use of the two instruments is permitted, although that leads to unfavorable urban-development outcomes. Yet in other cases, the law or practice determines application of the OODC to reduce the stock of TDC certificates. There are also cases where the use of the OODC is less attractive because of the TDC minimizes the role of the local government and is easy to use.

In sum, there is ample room for an in-depth study of the problems and opportunities created by the combination of the OODC with the TDC. Are they necessarily in competition? In conflict? Complementary? There seems to be certain confusion between the boundaries of these instruments and the ways in which they are different or complementary.

The OODC offers the opportunity to capture part of urban land value increments and use the funds for development programs of social-interest. The TDC has proved to be a powerful tool for making public-interest projects possible, including tenure legalization for low-income populations that require expropriations. The combined use of these two instruments, on the other hand, necessarily requires respect for the capacity of infrastructures, a capacity determined by the EC. Two critical questions thus arise.

First, it is important to evaluate the juridical limits of the compensation due to the property owner when the municipality imposes administrative limitations, easements, forced demolitions or other similar restrictions. This is particularly important considering that many of the TDC certificates now in circulation in the cities of Brazil originate as compensation for normative acts by local governments.

Second, the maximum coefficients established for OODC purposes do not necessarily have to reach maximum infrastructure capacity level. The alternative of combining the two instruments could be reserved for specific areas of influence of public projects that require expropriations.

## **H. Final Considerations**

### **Standardize and Strengthen the OODC**

Having a more solid conceptual understanding of the OODC instrument would be beneficial for the municipalities that are already applying the OODC as well as for those that are in the process of revising regulations with a view to its adoption. Such better understanding would strengthen the theoretical principles and expand knowledge on the potential negative and/or positive effects of the various application strategies adopted. In the 12 cities studied there is a visible lack consensus about the basic OODC concepts, particularly in relation to its central objective, namely, the recovery of incremental land values attributable to public interventions, but also in relation to its possible effects on urban land prices.

Any and all efforts to create and expand a common base of understanding of the instrument would be very beneficial. These efforts could be made through workshops, forums for discussion, and communication networks that would invest in and expand the basic technical training of municipal officials, enabling them to deal with this and other related legal instrument, such as the TDC and the Permit to Change Use for a Fee. Municipal management after the EC requires from municipal technicians a broader understanding of the urban dynamics in the production and reproduction of urban space, in order to make better use of the range of legal tools available and fulfill the social function of property and of the city.

### **Tools for Managing Land Valorization**

The instruments provided by the EC should be understood as a system to be operated through applications that are adjusted more or less to the situation at hand. In Curitiba and Porto Alegre, the competition between the OODC and the TDC produces unexpected results, while in Goiânia and Salvador the harmful results of their combined use are obvious.

However, there are situations in which competition and cumulative use should be better studied taking into account the different objectives (revenue generation or urban development) for a specific area of the city. And these objectives should be made explicit. For example, the use of an instrument mandating compulsory land subdivision and development may be associated with the OODC in the same location. The OODC role in recovering incremental land values and thus generating additional revenue does not conflict with the local government interest in promoting the use of land already served by infrastructure; in other words, it possible to justify the combined use of OODC with compulsory subdivision and development.

### **Data Base**

The future of the OODC, whether as a planning instrument of urban development or a tool in fiscal policy, depends on having municipal managers and planners that master its operation and conditions of application over the coming years.

Research shows that while the OODC is advancing hesitantly, the TDC is beginning to generate negative effects that result from excessive applications. It is important to recognize the difficulty of achieving a clear understanding of instruments such as Area Rights and the Right of First Refusal in terms of their contents and possibilities.

The seminars and studies carried out thus far have performed an important role in disseminating the concept and theoretical basis for the use of OODC. But in order to best translate this knowledge into meaningful results it is necessary to disseminate the rich OODC experience already accumulated (in some cities over more than 15 years) and gain public recognition for the usefulness and relevance of this and other EC instruments through exchanges between the teams responsible for their application, researchers, and educational organizations interested in the topic. These exchanges should use consistent databases. It is difficult to imagine new and relevant developments in the discussion on these instruments without systematic information concerning their application at the national level.

The task of creating municipal databases on the application of the EC instruments, and even a general database developed by municipalities and opened to the public is a necessary and pressing and warrants the involvement of universities, research institutes, non-governmental and private organizations, local governments, and, certainly the Ministry for the Cities.



## Appendix 1 – Research Synthesis

### Box 1: OODC Summary – Alvorada, R

Instrument (legal form)	Introduced as SC in the Master Plan for Urban and Environment Development for Alvorada in 2000, established in Law No. 1137, subsequently amended by Law No. 1461 dated 26 July 2004.
Design of the Instrument	Designed as a Variable Index, along with the Occupancy Rate and the Use Index. They are understood as indices promoting the desired occupancy and its scale based on the existing infrastructure.
Objectives	The law assigns to the SC only the objective of making the economic interest of the individual developer compatible with the public interest. Interpretive Resolution No. 2 (of 2002) classifies it as urban development instrument designed to stimulate civil construction, calibrate population density, produce a return on public investments. It is channeled through priority projects.
Application date	Alvorada received its first request for SC application in 2001. In 2002 two interpretive resolutions were needed in order to classify urban activities and establish the procedures for SC acquisition. In total, slightly more than 10 cases are reported. The system is in operation now, there are more on-going projects.
Land utilization Indices	A basic utilization index and a basic occupancy rate are adopted for each zone of the municipality. Various possibilities for increasing these indices are then established in a table, with the SC index established in accord with each level of increase.
Territorial extension	The SC affects all zones of the city, except the preservation zone, the special public-services zone, and four transition zones. In these zones the basic indices prevail: for IA [Utilization Index] and TO [Occupancy Rate] respectively 0.5 and 20 percent, 3 and 80 percent, and 0.65 and 50 percent.
Formula for calculating the charge	<p>The charge is based on the fiscal value of the parcel in question (tax value for real estate property tax purposes). The calculation is quite complex, since a claim for project extension may result in the application of SC1, SC2, or SC3, according to the table in the Appendix to the Master Plan. For example, in Central Area 3, where the basic indices are TO-80 percent and IA-1, increase for IA-2 (in this case, without change in the TO) involves achieving SC1 of 1, with payment of one time the fiscal value of the equivalent additional amount of land. If the claim exceeds these indices and attains SC2 (TO of 85 percent and IA of 3), the amount that must be paid is the sum of the full amount for SC1 plus the proportional amount (two times the fiscal value) for the additional area claimed. When SC2 is exceeded and SC3 is attained, the same cumulative and progressive logic applies.</p> <p>Despite the sophistication of the calculation, the final amount charged is not high due to low fiscal values used in the calculation.</p> <p>The charge is always paid in cash to the Department of the Treasury,</p>

	which monitors the funds collected.
Use of revenues collected	The funds obtained are used exclusively for a specified group of priority projects: infrastructure on streets, buildings intended for public services, markets, and public areas for leisure activities. The funds go into a special interest-bearing account, designated in the law as the Development Fund, to be allocated by the mayor after consultation with the Planning Council. The funds accumulated to date are very little, and no use has been proposed for them.
Social-interest monitoring	Monitoring is done by the General Master Plan Council, which meets periodically. It has 23 members, designated in the Master Plan; four members represent the Executive Branch (plus the Planning Secretary, who presides), the others represent the macro-zones, the inhabitants, and the professional associations (CREA, OAB, Com. and Ind. Assoc).
Effect on price of land and real estate property tax	The relationship is not acknowledged, either negatively (loss of funds from regulation of market prices) or positively (incentive to increase population density in areas equipped with infrastructure).
The instrument and the recovery of incremental land values	The idea is present indirectly when return on public investments is specified as an objective of the instrument, via the possibility of exploitation of the installed infrastructure capacity. The subject is not explicitly mentioned.
Comments	<p>SC was introduced in the first Master Plan for Alvorada, in 2000, in fairly simplified form, at least in terms of its intention, comparable to the Utilization Index and the Occupancy Rate. The three indices in combination sought to establish parameters for co-existence of activities and non-aggression against the environment.</p> <p>However, difficulties began to arise when an effort was made to apply the SC, since it was conceived as a combined progressive for-fee permit index of building potential. An interpretive resolution that explained the collection details was necessary. The Master Plan was amended in 2004, introducing changes in the SC that included sub-division of the more central zones, modification of the table of indices per zone, and exclusion of areas for the computation of indices.</p> <p>In zones in which the SC can be used, the basic utilization index ranges from 1 to 2, the maximum utilization index from 3 to 5. The Occupancy Rate ranges from 66 percent to 80 percent, the maximum rates from 75 percent to 90 percent (except in the industrial zone, in which the occupancy rate is 50 percent and does not vary). The relatively very high occupancy rates can be adjusted by means of other urban-development parameters, including the set-back line of 4.0 meters for residential units. The SC is an index that in general ranges from 1 to 3, in conformity with the change in the previous parameters, and may reach 8 in the industrial zone. The fee calculations are done by the Central Management Office of the Municipal Department of Planning and Housing.</p>

	<p>When the Master Plan was revised, the intention was to include also the TDC, but the technicians responsible for the revision opted not to do so after they learned of about the problems encountered in the combined application of the two instruments in Porto Alegre. At the end of 2004, resistance to a broader application of the instrument led the Municipal Legislative Chamber to reduce by a factor of 50 percent the amount of the charge, and that remained in effect during the 2005 fiscal year. At the end of that period, the instrument was discussed again, and consideration was given to abolishing it. The <i>Associação Comercial e Industrial</i> (Chamber of Commerce and Industry) argued that it had thwarted investments in the city. Ultimately a reduction factor of 60 percent was approved, without a final deadline. Thus values already reduced because of the low fiscal assessments were reduced even further.</p> <p>There is not much interest in the instrument at the executive-branch level of the government because its low revenue potential has been demonstrated.</p> <p>In the final analysis, the SC in Alvorada seems to be the flagship of a few city planning technicians who believe in its potential for urban re-organization.</p>
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**Box 2: OODC Summary – Blumenau, SC**

Instrument (legal form)	The SC instrument was created in Blumenau in 1997 by means of Supplemental Law No. 142, dated 4 March 1997, which established the Master Plan for the Municipality.
Design of the Instrument	Law No. 142 provides that the executive branch may authorize the creation of building potential in excess of the utilization coefficient, in exchange for the payment of a charge that will be used to establish urban and community facilities, with due consideration for the other urban-development parameters. The prevailing view of the instrument is that it is a source of revenue.
Objectives	The law does not state a clear-cut objective for the instrument, but mandates the use of the revenues to finance urban and community facilities.
Application date	The Municipality of Blumenau has been applying the SC since 1997, and since then it has approved ten requests for its use.
Land utilization Indices	The Municipality of Blumenau adopted variable utilization indices for the city as basic coefficients before the SC, and with the SC it offered the possibility of an increase chosen by the applicant, of up to 30 percent maximum above these indices.
Territorial extension	The SC applies to the entire city.
Formula of calculating the charge	The amount to be paid as charge will be equal to the market value of the land necessary for construction of the additional square meters, in conformity with the following formula: $(A(AxC)M) - (AxC) / C = T \Rightarrow S = 100 \text{ percent PM}$

	<p>In which: A = area of land; C= utilization coefficient; M= increase in the utilization coefficient; T = land necessary for construction of the additional area; S = amount to be paid for the SC.</p> <p>The amount may be paid in cash or in land acquired for an equal amount, which will become part of the municipal assets.</p>
Use of revenues collected	<p>The revenues collected from the use of the instrument go directly into the Municipal Urban Development Fund, and are used for the installation of urban and community facilities. At the present the fund has R\$168,000. Total revenues to date are estimated in approximately R\$500,000.</p>
Social-interest monitoring	<p>The Municipal Fund is managed by the Municipal Urban Planning Council.</p>
Effect on price of land and real estate property tax	<p>The municipal government does not consider any relationship between the application of the SC and changes in land prices. It also does not note a negative relationship between the SC and the real estate property tax. If there is an effect on that tax, it would be positive, since the instrument leads to greater densification.</p>
The Instrument and recovery of incremental land values	<p>The concept of application of the instrument to recover incremental land value is not present either in the legislation that established the instrument or in the discourse of the municipal technicians interviewed. The prevailing vision among the local technicians is that the instrument is a potential mechanism (however limited) to provide financing for urban and community facilities.</p>
Comments	<p>According to the local technicians, the instrument was incorporated into Blumenau legislation in 1997 without a broad understanding of its features and implications. There was a lack of understanding especially about the interaction between the SC and the TDC. The market showed limited interest in the instrument because the maximum indices permitted were already fairly generous. There has not been much interest in purchasing the extra coefficients offered by the SC. The legislation provides for three different uses of the instrument: (a) the conventional use which consists of a grant of up to 30 percent over the utilization coefficient permitted, with the charge paid in cash or in land; (b) a grant of 5 percent over the utilization coefficient permitted, with the charge paid in works of art; and (c) a grant of special conditions for subdivisions in areas near municipal parks, with the charge paid in the form of donation of land contiguous to the parks. These two latter SC alternatives were never applied and are being revised. It is interesting to note that the third alternative is called SC even though there is no creation of additional building potential. The instrument is being revised, and the revision is expected to resolve several problems, namely: the lack of clarity of the current legislation with respect to the criteria for application of the SC and the TDC, the reduction of non-chargeable utilization coefficients (considered very high at the present time), and the use of the instrument as a tool to increase density in areas served with infrastructure but where the market shows no interest in investing.</p>

**Box 3: OODC Summary – Campo Grande, MS**

Instrument (legal form)	In Campo Grande the general design of the OODC has taken the form of two different laws: Law No. 3.228, dated 14 December 2000 (the Negotiated Development Law) and Supplemental Law No. 62 dated 5 December 2003, which regulates the OODC, both based on Supplemental Law No. 050 dated 22 November 1995 (the Master Plan).
Design of the Instrument	In Campo Grande the OODC is not defined according to the EC as a charge for a grant of the right to build beyond the basic utilization coefficient. Such thing does not exist in this city. Instead, the Negotiated Development is the instrument by means of which the municipality and the property owner negotiate the TDC and/or the Change of Urban Development Indices and Categories and Sub-Categories of Land Use permitted. The charge to grant such a building permit pays for the authorization to build over development coefficients permitted for the location. Such charge is issued by the Municipal Executive Branch, and is payable by the owner.
Objectives	Land acquisition and revenues for the execution of social-interest projects are the goals defined by law for a change in utilization indices and categories of use by means of Negotiated Development. On the other hand, the purpose of the OODC is to balance occupancy of urban land and optimize the use of existing infrastructure.
Application date	Negotiated Development and the OODC permit have been in effect since their respective approvals in 2000 and 2003. But only the OODC has actually been applied. There has been no demand for change of indices or uses via Negotiated Development.
Land utilization indices	There is no formal basic coefficient of land utilization in Campo Grande. However, given the existence of two legal methods for exceeding the maximum utilization coefficients in effect, we can consider these as basic pre-existing coefficients for purposes of the OODC. These coefficients are variable, ranging from CA [Utilization Coefficient] = 1 to the categorical limit of CA=6. The limit of the Change of Development Indices is set as twice the Utilization Coefficient specified for the location to a maximum of CA=6, and a Maximum Occupancy Rate (TO) = 70 percent. The change in building potential is limited to an increase of 10 percent in the Building Height Index, 10 percent in the Utilization Coefficient, and 20 percent in the Land Occupancy Rate in effect for the locality. Change of minimum set-backs is prohibited; categorical limits are CA=6 and TO=77 percent.
Territorial Extension	In the Municipality of Campo Grande, the grant of a building permit for-a-fee can be applied to properties located in urban areas in consolidated districts, where there infrastructure and community facilities exist, provided that the operation of these facilities is not compromised by the surcharge imposed for the increase in coefficient. The negotiated change

	in indices and uses is applicable throughout the territory of the municipality, with the exception of the situations established in Articles 13 and 14.
Formula for calculating the charge	The charge payable for Change of Index and/or Use must be at least equal to 70 percent of the value increment accruing to the property by virtue of the development changes allowed. The per-square-meter value of the area increased by such changes is the per-square-meter value of undeveloped land in the area (established in the tax rolls) or the market value reported by the Chamber of Real Estate Values, which ever is higher.
Use of revenues collected	The law that establishes the charge for a building permit does not specify the use for the revenues collected. But a minimum of 10 percent of the total fees collected for the Change of Indices and/or Uses must be deposited in the FUNDHAB (Law No. 3.429/97) to be used in the production of urbanized lots and housing units for residents of slum areas.
Social-interest monitoring	All development-related projects are studied by the Municipal Development and Urbanization Council, a consulting entity established in 1987. Funds collected from building permits are deposited in the Municipal Treasury. There are no mechanisms for public monitoring the application of funds other than those already established in ordinary legislation. The lack of success of the Change in Indices and Uses through Negotiated Development means that no funds have been deposited in FUNDHAB.
Effect on price of land and real estate property tax	There is no forecast or research on this subject exists.
The instrument and the recovery of incremental land values	According to the officials interviewed, the funds collected from the charge for building permits total less than 0.1 percent of the municipal revenues, and its goals are seen as facilitating changes and gains that the zoning does not permit, in benefit of property owners and contractors. The formula for calculating the charge [ $V_v \times m^2$ additional] without a reduction factor indicates that the instrument is designed strictly for legalization of structures already built, and such is indeed the observed outcome.
Comments	The Campo Grande case reveals special features of the application of the OODC. There are specific types of charge for permits that meet with varying degrees of success. But there was an effort in the process of revising the Master Plan of analysis, interpretation, and evaluation of the instrument in light of the principles established in the EC. The OODC is essentially an instrument that seems compatible with increasing the flexibility of application of development regulations, rather than with the objective of balancing occupancy of urban land and optimizing the use of existing infrastructure. In practice, it is not clear if it also acts as an undesirable incentive to violate regulations.

	<p>In the absence of a specific allocation, the revenues generated are deposited directly with the Treasury, and thus do not serve any clearly developmental or redistributive purpose.</p> <p>The concept of a charge in exchange for additional building potential seems to be in Campo Grande an obstacle to the establishment of the instrument as defined in the EC, and for the revision of the Master Plan. The problem is posed by local officials as follows: “In a low-density city there is ample supply of properties (120,000 undeveloped lots), with the maximum coefficient already CA=6, what more can be sold?” “Our intention was to reduce this coefficient so that we could sell additional building potential. But politically we didn’t succeed in implementing the reduction.” The concept of a charge collected within a Cb/Cm range would indicate the use of OODC to maintain the maximum utilization coefficient and to introduce the basic coefficient as the level for exemption of charge, thus evading the political disadvantage of selling a right that has just been eliminated.</p> <p>The officials interviewed suggest, on the other hand, a possible excess and/or overlapping of charges, given the role played in this city by the Guide to Development Guidelines – Municipal Law No. 2.567/1988). This law allows the Municipality to impose, as part of other requirements for project approval, the proportional provision of public facilities (schools, medical facilities, playgrounds) in all residential developments having more than 50 housing units.</p>
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**Box 4: OODC Summary – Curitiba, PR**

Instrument (legal form)	The SC was introduced in Curitiba in 1990 with the passage of regular Law No. 7420/90. The law currently in effect is Law No. 9802 of January 3, 2000, which created incentives to finance social housing programs. The Master Plan revised in 2004 (Law No. 11266/04) established a period of three years for the drafting of a specific law that would regulate the OODC in conformity with EC guidelines.
Design of the instrument	The SC concept in effect has a strong redistributive bias because its legal goal is to give “creative incentives for the production of social housing programs.” This framework offers the possibility for granting an increase in the building potential (increase in the utilization coefficient and/or the height of the building).
Objectives	The objective of the instrument, clearly stated in Law No. 9802/2000, is to finance social housing programs. However, its application is also aimed at reorienting urban density to bring it in-line with the existing infrastructure. The 2004 Master Plan allows the use OODC funds for other purposes besides social housing, in accordance with EC guidelines.
Application date	The SC has been used in Curitiba since 1990 without interruption, i.e. for 16 years. According to the Department of City Planning, from March 1990 to August 2005, the municipality issued 787 SC certificates, which generated R\$ 25,451,119 in revenues.

Land utilization indices	After introduction of the instrument, the maximum coefficients became the basic coefficients, and the SC became an extra added on the coefficients permitted by the legislation. This logic still prevails. The instrument applies only to residential use (including temporary housing, apartments and hotels), and the indices that can be changed are the land utilization coefficients and the number of floors. The 2004 Master Plan also includes the possibility of change of use, but the plan requires a specific regulatory law that to date has not yet been drafted.
Territorial extension	Residential zones 1 and 2, and non-residential uses are excluded from the area where the SC can be applied.
Formula for calculating the charge	The calculation is based on the assessed value of the land (using the per-square-meter fiscal value) necessary for the construction of the square-meter area exceeding the basic coefficient, multiplied by an adjustment factor depending on the land use. This factor is 0.75 for acquisition of utilization coefficient and 0.15 for acquisition of additional floors.
Use of revenues collected	The revenues go directly into the <i>Fundo Municipal de Habitação</i> (FMH) [Municipal Housing Fund] and are used to finance social housing and especially the development of urbanized low-cost lots.
Social-interest monitoring	Social-interest monitoring is done by the Consulting Council of Institute of Urban Research and Planning of Curitiba (IPPUC).
Comments	<p>The fact that the instrument was introduced with an extra allowance above what was permitted by the legislation, and is used as an incentive for densification in zones where greater density is desired made the instrument easy to be absorbed by the real estate market, without creating resistance or opposition.</p> <p>The instrument obviously competes with the TDC, since, although the TDC is directed more toward commercial use it can also be used for residential development, and the municipality participates only as mediator in the process—recording the property that receives additional building potential as well as the property from which such potential is transferred, and calculates the appropriate charge. However, the municipality has no way to ensure that the final sales price is in fact the amount agreed upon and, in practice, there are sales of building potential at lower price, such deals attract to the TDC several parties that could have been interested in the SC. Curitiba still has a reasonable stock of building potential that can be put up for sale, in the form of properties from which additional building potential can be transferred, and the demand for transfers (TDC) has been much greater than for SC.</p> <p>Curitiba has already introduced several corrections to the SC. For example, it has excluded several neighborhoods that resulted having higher density than expected, e.g. the Batel area. The evaluation of the SC by municipal technicians is positive, although it is felt that some aspects need to be improved, such as the charge payable for acquisition of floors, which is considered too low, and the competition between the SC and the TDC, already mentioned. The revenues from the use of the SC are considered an important contribution to the financing of social housing.</p>



**Box 5: OODC Summary – Florianópolis, SC**

Instrument (legal form)	The SC was established in Florianópolis in 1989 by Law No. 3338/89, and was subsequently ratified by Supplemental Law No. 01/97, which instituted the District-Capital occupancy plan.
Design of the Instrument	It is understood that the infrastructure of the city is sufficient to support a utilization coefficient equal to or less than one (1.0), and that the municipality will be able to approve a higher utilization coefficient in exchange for a fee to be deposited in a specific fund. The underlying idea is that a greater utilization of land requires the payment of a fee that can be reinvested to support the greater density permitted. In other words, the SC is viewed as a fee applied when the utilization coefficient 1.0 is increased.
Objectives	Although the law does not state the SC objective, its goal is to finance infrastructure projects when the land utilization is greater than what is appropriate for the existing infrastructure. That is, when the utilization coefficient is greater than one. The objective is to generate revenue.
Application date	The Municipality of Florianópolis has applied the SC since 1989, without interruption, so it has already accumulated 17 years of experience with the use of the instrument,
Land utilization indices	The utilization coefficient (basic coefficient) is one for the entire city. The SC payment is collected in the form of a fee.
Territorial extension	The SC applies to the entire city.
Formula for calculating the charge	The calculation formula considers the additional area allowed for constructed (in relation to the utilization coefficient 1.0) multiplied by the average <i>Custo Unitário Básico</i> (CUB) [Basic Unit Cost of Construction], which is published monthly by the SINDUSCON, multiplied by a fee in proportion to the utilization index. This fee is progressive.
Use of revenues collected	The revenues from the instrument go into the general account of the municipality and have no specific purpose. Revenues in 2005 were R\$ 1,332,027 and in 2006 have already reached R\$ 601,407 in mid-year.
Social-interest monitoring	There is no mechanism for social-interest control of the revenues obtained from application of the instrument. The <i>Fundo Municipal de Integração Social</i> [Municipal Social Integration Fund] (established by Law No. 3338/89) and the <i>Fundo de Obras Urbanas</i> [Urban Projects Fund] (established by Law No. LC 01/97) were never actually created.
Effect on price of land and real estate property tax	The municipal administration does not perceive a relationship between the application of the SC and real estate prices. It also does not note a negative relationship between the collection of SC fees and real estate property tax revenues.
The instrument and the recovery of incremental	The idea of using the SC as a tool to recover incremental land values is not present in the legislation that established the instrument. Neither is it contemplated by the municipal officials interviewed. The vision that prevails among the officials is that the instrument is a potential

land values	mechanism (albeit not an effective one) for the financing of urban infrastructure.
Comments	<p>The SC is viewed by the staff of the City Planning and Public Services Department as a legal instrument, not an urban development instrument, because it is considered a simple fee. In contrast to the TDC is considered a development instrument because it meets development needs such as preservation of historic buildings, widening of streets, and creation of green spaces. The only exemptions specified in the application of the SC are for social housing and restoration of historic buildings. By establishing the utilization coefficient equal to one for the entire city, Florianópolis succeeds in fostering a sense of social justice associated with the creation of the instrument, because it succeeds in resolving the question of unequal distribution of free coefficients.</p> <p>Nevertheless, because of the municipality has not created a special fund where SC revenues are deposited, the central objective of the instrument, which is to re-establish the balance between existing infrastructure and greater utilization of land is compromised.</p> <p>The greatest weakness in the application of the instrument in Florianópolis is that there is no social control over the use of its revenues. This voids the development angle of the instrument, which should that of redistributing infrastructure in the city. Instead, the SC is used merely as a source of revenues for the municipality, benefitting more of the Treasury Department than the Planning Institute. The application of the instrument is already fairly consolidated. Over time agreements were reached between the municipality and private developers with respect to use of the instrument, although the initial phase was marked by a number of legal actions and deposits of the fee with the court. At present, according to the Treasury Department, there is no major resistance to the process, and the default rate is low. (The fee can be paid over a maximum of 24 monthly installments.)</p> <p>The main internal and external criticisms concern the specific use of the funds collected. Other major criticisms recently aired concern the indiscriminate use of the instrument and its negative impact on the urban quality of the city. Closer analysis indicates that these criticisms actually refer in fact to the indiscriminate use of the TDC.</p>

**Box 6: OODC Summary – Goiânia, GO**

Instrument (legal form)	The Permit-for a-Fee, known as <i>Licença Onerosa</i> (LO) or SC was established in 1994 by the Land Use and Occupancy Law (Complementary Law No. 031/1994). The instrument does not appear in the 1992 Master Plan.
Design of the Instrument	Any built area that exceeds the respective parcel area, whether it involves occupancy of air space or underground space, is considered SC. The utilization coefficient free-of-charge equal to one (1.0) was established for the entire urban zone and urban expansion zone of the municipality. The

	LO can only be used for multi-family residential developments. According to its design, the LO is an instrument intended for recovering the incremental densities that may be established over and above basic coefficient of 1.0. The intention is to redevelop the areas where this greater density is taking place, to offset the imbalance created. However, the revenues from the LO have not been used to restore infrastructure imbalances; but have been applied instead for social purposes.
Objectives	The funds are intended for the <i>Fundo Municipal de Desenvolvimento Urbano</i> (FMDU) [Municipal Urban Development Fund], established by Supplemental Law No. 031/1994 and regulated by Law No. 7.494/1995 and by Decree No. 2.909/1995. The purpose is to provide financial support for the development of projects related to environment protection, social housing, and installation of public and community facilities, especially in Zones of Special Social Interest (ZEIS). The objective of the application is to generate municipal revenues.
Application date	The Municipality of Goiânia has been applying the LO since 1995.
Land utilization indices	The utilization coefficient is 1.0 for the entire urban area and urban expansion area. The LO is applied in areas in which the utilization coefficient exceeds that basic coefficient. The maximum coefficient may reach 3.5. The indices, and consequently the densities, were increased in the 1992 Master Plan but not in the law that established the LO.
Territorial extension	The LO applies in the entire city but not in the rural area. Because there are low density zones within the city, the actual area where the LO can actually be used is approximately 50 percent of the combined urban and expansion areas. The perimeter of these areas coincides with the boundaries of the medium-density and high-density zones where multi-family residential buildings are permitted (medium density 430 inhabitants per hectare, high density 690 inhabitants per hectare).
Formula for calculating the charge	The calculation formula considers the additional area to be build in relation to utilization coefficient equal to one. The charge to be paid for issuance of building permit is calculated with the following formula $VLO = VSN \times QSC$ , in which: VLO = amount to be paid for issuance of the permit; VSN = fiscal value of the land per square meter of natural land; QSC = number of additional square meters. The Municipal Legislative Chamber introduced a deflation factor of 0.2 on the amount to be paid as follows (1995= $VSN \times 0.025$ ; 1996= $VSN \times 0.05$ ; 1997= $VSN \times 0.1$ ; and starting in 1998 = $VSN \times 0.2$ ).
Use of revenues collected	According to Law No. 031/1994, the LO revenues are intended to finance public facilities in the ZEIS, social housing and environment-protection projects, and support the <i>Secretaria de Planejamento Municipal</i> (SEPLAM) [Municipal Planning Secretariat]. However, given the small amount of funds actually used in these projects, the LO revenues are in fact subsidizing the technical studies to support the SEPLAN in the revision of the Master Plan. In 2003 the FMDU receipts totaled R\$ 2.9 million, while total own-source municipal revenues were R\$ 916 million,

	<p>i.e. LO revenues were less than 1.0 percent of the total (0.32 percent in 2003, 0.36 percent in 2004, and 0.19 percent in 2005). The steep decline in 2005 reflects the fact that municipal revenues increased and the fiscal value of real estate properties was not updated.</p>
Social-interest monitoring	<p>The revenues are managed by the FMDU and are monitored by a 32-member Municipal Urban Policy Counsel (COMPUR), comprising representatives of SEPLAM, the Municipal Department of Public Works, the Municipal Department of the Environment, the Municipal Company of Municipal Projects, the Department of Public Roads, the Legislature, civil society, universities, and other entities. The statement of application of funds and the consolidated statement of municipal revenues are published monthly.</p>
Effect on price of land and real estate property tax	<p>The municipal government does not identify relations between the application of the LO and real estate prices. Nor does it notice a negative relationship between LO collections and real estate property tax revenues.</p>
The instrument and the recovery of incremental land values	<p>The concept of LO as a tool to recover incremental land values is not present in the legislation that established the instrument. But it is present in the statements made by the municipal technicians interviewed. Its revenue potential is also valued as a source of funds for the objectives specified in the law (Law No. 031/1994).</p>
Comments	<p>The SEPLAM values the LO and is attempting to improve its design in the next Master Plan, taking into account that revenues are low compared to the benefits obtained by the property owners. An average of 42 LO grants have been approved each year since 1998.</p> <p>Exemptions can be granted in the following cases: Buildings intended for families with incomes up to eight (8) minimum salaries and buildings intended for special uses—such as commercial, medical or educational service buildings. Special-use buildings are deemed regional facilities, but in reality these local facilities that do not pay the LO. Multi-family residential developments located in main arteries, which should not be classified as special use buildings, are exempted as hotel-apartments.</p> <p>The municipal administration (SEPLAM) considers the FNDU a positive undertaking, and it has been well managed. In 2003 the collection system was reformulated, and all LO revenues now go into the FNDU instead of municipal Treasury, this change facilitates the use of the LO.</p> <p>The weak points in the experience of Goiânia with the LO is the low revenues collected and the possibility of combining the LO with the TDC. Among other factors, the low revenues are due to the fact that the utilization index calculated for the zones that permit the construction of multi-family residential developments is calculated only for the private area of the dwelling unit (apartment). Other areas in the residential building (balconies, lounges, hallways, elevators, stairwell, parking, etc.) are not be computed for purposes of the utilization index. This means that after the building is built an index that is three times the area of the parcel is in fact six times that area, and the LO is collected for only a fraction of</p>

	<p>that. Moreover, the percentage collected for the LO is only 0.2 of the fiscal value of the building and that value is outdated in relation to the real estate market value as a result of reassessment having to be approved by the Legislature. In addition to the deflation factor, the regulation permits payment in five installments; the first immediately, then one installment every 90 days, or a total of four installments (one year). There are cases in which the developer pays the first installment, approves the project, then challenges the LO in a court.</p> <p>Currently there are six judicial suits based on two types of arguments. The first argument is unconstitutionality of the LO, since the calculation basis is the same as the basis for the real estate property tax, with the benchmark being the general assessment map. The second argument refers to the fact that when the instrument was established, the Treasury Department launched it as a tax. Subsequently, the SEPLAM transformed it into a public fee.</p> <p>The LO and the TDC operating in parallel has serious environmental consequences. The two systems are not interconnected. The Setor Bueno case where the LO and the TDC were used in combination is a case in point of negative impact.</p>
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**Box 7: OODC Summary – Natal, RN**

Instrument (legal form)	The OODC was established in Natal by Supplemental Law No. 07 of August 5, 1994 (Master Plan), and was revised by Supplemental Laws Nos. 022 of August 18, 1999 and 027 of November 3, 2000.
Design of the Instrument	Since its inception the OODC has been applied in Natal in a format similar to that established in the EC. It has single basic coefficients for each category of use for the entire city, maximum coefficients differentiated by neighborhood and compatible with the available infrastructure; utilization above the basic coefficient is granted in exchange of payment of a charge. The original normative system (LC 07/94) combined the application of the land utilization coefficients with density parameters and stock of buildable area. In practice, the monitoring of the stock was never used and the density parameters tend to be subsumed in the land utilization coefficients.
Objectives	The law establishes the objective of ensuring that the property performs its social-interest function by means of redistribution of funds obtained from land utilization above the basic parameters. The officials interviewed defined the objective as recovering for the community the incremental real estate values resulting from the public investments, streamlining the use of infrastructure, avoiding overburdening infrastructure or leaving it idle, fighting real estate speculation, and seeking more balanced growth among the neighborhoods that can have increased density.
Application date	The OODC has been applied in Natal without interruption since 1995.

Land utilization indices	The basic utilization coefficient for non-residential uses in the entire urban zone is 1.8. The basic residential density in the urban zone was 180 inhabitants per hectare in 1994, rising to 225 inhabitants per hectare in 1999. In density zones where OODC can be applied, the permissible maximum densities range from 300 to 550 inhabitants per hectare and the maximum coefficients range from 3.0 to 5.5. The proposed revision of the Master Plan, based on practical experience, contemplates a basic coefficient (CB)=1.0 for residential use and a CB=1.4 for non-residential use. The proposal of CB=1.0 for all uses was debated in an attempt to reduce by half the CB in non-dense areas without possibility of increase. Another study that is under way focuses on a possible reduction of the maximum coefficient (CM=5.5) which is considered too high, and possibly should be reduced to CM=3.5.
Territorial extension	The application of the OODC in Natal aims to be systemic in nature, and is modeled on the urban zoning structure. The city is divided into three major zones: Basic Density Zone (where there is no OODC), Zone available for densification (subject to OODC), and Environment Protection Zone (where OODC doesn't apply)..
Formula for calculating the charge	The OODC charge is equal to 1 percent of the estimated cost of the project, based on the CUB, furnished by the Civil Construction Union. The officials interviewed admit that the CUB does not adequately reflect the valorization of the land. There was a proposed to revise this formula using 30 percent of the per-square-meter value, with adjustments every two years, until it reached 70 percent. However, the negotiations under way indicate that a maximum of 12 percent is more likely.
Use of revenues collected	The Urbanization Fund (Supplemental Law 07/94) is where revenues from OODC are deposited, but it has not yet been activated. The Fund is intended chiefly for programs in Zones of Special Social Interest (ZEIS) and basic sanitation, and OODC is its principal source of revenues. From 1995 until August 2004 OODC revenues total R\$2,007,113.
Social-interest monitoring	Supplemental Law 07/94 provides that the Urbanization Fund is to be managed by an Executive Council composed of representatives of civil society and authorities appointed by the Executive, and is to be overseen by the Municipal Urban Planning and Environment Council. The Master Plan mandates the preparation of a specific plan for application of the funds be sent annually to the Municipal Legislative Chamber; but this has never been done. Together is the non-application of the OODC revenues, this seems to indicate serious inefficiencies in the management of funds.
Effect on price of land and real estate property tax	There is no estimate of the effects of the OODC on the real estate market or on the basis for calculation of the urban property tax (IPTU). The officials interviewed consider necessary the participation of real estate market specialists in the planning and management process of the OODC.
Instrument and the recovery of incremental	Because the OODC does not reflect actual prices changes in real estate market, the calculation formula based exclusively on the cost of construction places a relatively higher burden on real estate investments

land values	in less valorized areas. While an increase in the current share of 1 percent would lead to an increase in revenues, that would cause even greater distortions in terms of recovering incremental land values.
	<p>Natal was one of the cities that pioneered in the establishment of the OODC, with revenue collection uninterrupted since 1995. Another unique feature is the existence of a statistical summary of the experience available for researchers. These data show high non-compliance levels due to weak monitoring of collections. The managers estimate that the recent computerized link-up with the Treasury Department will correct this problem. The officials interviewed expressed definite frustration with the results of the application of the instrument because of the relatively very low revenues (R\$ 3.92 per square meter, on average) and the absence, thus far, of plans for the use of the approximately R\$2 million already collected.</p> <p>It is hoped that the current revision of the Master Plan will result in improving the formula to calculate the charge by introducing a model based on the per-square-meter value of the land. It is estimated that such change may result in differentiated OODC costs which in turn may stimulate real estate activity in neighborhoods with capacity for densification but now relatively neglected by real estate investors, as reflected in very few applications of OODC.</p> <p>Planners claim that the collaboration of real estate market specialists in the planning process is a positive development.</p>

**Box 8: OODC Summary – Niterói, RJ**

Instrument (legal form)	SC is the name given to the OODC in Niterói. It was established as an urban management instrument in the 1992 Municipal Master Plan, and assumed its current form in 2002, when it was revised as part of the Regional Development Plans (PUR) for Praias da Baía and Oceânica. However, the actual application of the SC begins with the approval of Law No. 2123 of 2004, which adapted the instruments to the EC guidelines and established the <i>Fundo Municipal de Urbanização, Habitação e Regularização Fundiária</i> —FUNHAB [Municipal Fund for Urban Development, Housing, and Tenure Legalization].
Design of the instrument	Although it is considered an instrument for producing additional financial resources and for social-interest redistribution of the benefits of development, in Niterói the SC aims to orient urban growth by means of a system of restrictions and incentives established by differentiation of reduction factors and exemptions.
Objectives	Some of the objectives mentioned in documents analyzed are: expansion of investment capacity of the Municipality in the urban territory on a sustainable basis, recovery by the public sector of part of the investments made, and reduction of historical inequalities in the distribution of urban public facilities and services.

Application date	The OODC was applied in Niterói from 1995 to 2002, but its application in the form recommended by the EC dates from 2004.
Land utilization indices	In the two regions in which the SC has already been applied (Praias da Baía and Oceânica), the basic utilization coefficients (BC) are 2.0 and 1.0, respectively. The maximum coefficients (MC) are established indirectly, as a result of the application of the construction parameters specified in the pertinent Regional Development Plans. In the Praias da Baía, which is denser and has more high-rise buildings, the MC is 7.5, which results in a charge of up to R\$ 700,000. In the Oceânica region, the MC is below 1.8. This, together with a high reduction factor results in insignificant OODC charges.
Territorial extension	Law No. 2123 of 2004 defines the “Right to Build” as subject to the payment of a charge throughout the urban zone of the municipality whenever the developer uses a land utilization coefficient greater than the BC, up to the MC permitted by the Regional Development Plan. That being the case, the effectiveness of this provision is still limited to the regions of Praias da Baía and Oceânica, precisely the areas of greatest real estate valorization.
Formula for calculating the charge	The formula to calculate the OODC charge is: $SC = [(Ca - Cb)^2 / FC] \times VV,$ Where: SC = value of the SC, Ca = land use coefficient, Cb = basic use coefficient, FC = correction factor, VV = fiscal value of the land, used to calculate the real estate tax. The correction factor is legally established in each Regional Development Plan (PUR). In the PURs for the Norte and Praias Oceânicas regions, it is 10, and in the PUR for the Praias da Baía varies from 15 to 50, according to Table 14 in Appendix II.
Use of revenues collected	The SC funds are collected in the FUNHAB and deposited in an account linked to a specific project program. Such funds can be applied only for purposes of tenure legalization, formation of land banks, control and guidance of urban expansion, establishment of urban and community facilities, creation of public spaces and recreation areas, environmental conservation and protection areas and environment programs, protection of areas of historical, cultural, and landscape interest, and social housing programs and projects (such as development of slums areas, construction or recovery of dwellings, development of housing projects, purchase of buildings intended for low-income housing programs, and improvements in the conditions of low-income multi-family buildings, including technical and material support). The law provides that a minimum of 30 percent of the revenues must be applied in Zones of Special Social Interest (ZEIS). In its first year of operation, FUNHAB spent all its revenues in slope containment projects in low-income areas.



Social-interest monitoring	The FUNHAB established by Law No. 2121/2004 is governed by specific legislation and operates in the Municipal Department of City Planning. Its Board of Directors is composed of representatives from the Departments of City Planning, Housing, and Treasury, the Office of the Public Prosecutor, the Agency for Urban Development, the Municipal Housing, Development, and Sanitation Corporation, the Municipal Legislative Chamber, and the Associations of Residents. It is the job of the Board to prepare the annual budget and the plan for application of the resources for the approval of the Mayor.
Effect on price of land and real estate property tax	The effect of the SC on land prices and, consequently, on the base for calculating the real estate property tax, is not monitored by the municipal government. It is admitted, however, that such impact is negligent given the current scale of application of the instrument.
The instrument and the recovery of incremental values	The recovery of real estate property valorization for public purposes is not specifically mentioned in the law but is one of the principal justifications for the SC in Niterói and the funds recovered are always allocated for re-investment in development projects. Emphasis is placed on the mandatory use, not specified in the EC, of a minimum of 30 percent of the FUHAB funds for ZEIS.
Comments	In Niterói the prevailing idea is that OODC constitutes a system of relatively differentiated costs to some extent capable of affecting real estate market trends in favor of the municipal planning norms. In fact, this view seem to be the only consistent perspective of the OODC as an urban development instrument, except for its accelerating effect on densification trends due to extraordinary maximum coefficients in regions that are already valorized. This view is countered by the slowness of the approval of the Regional Development Plans. According to the law, OODC can only be applied in areas covered by a Regional Development Plan and the morose process of plan approval prevents the extension of the SC to the entire urban zone. Thus in Niterói as in the majority of the cities, SC is essentially an instrument for collection of fees in regions benefited by public investments and natural amenities. The formula for calculating the charge is unique among the cases studied because it provides for exponential growth in the amount to be paid for additional built-up area, which appears consistent with the objective of progressive fees for the additional building potential. However, such impact appears to materialize only in the Praias da Baía, where the combination of building parameters makes it possible to achieve MC of up to 7.5. Although formally there has been no increase in the MC previously in use at the time of introduction of the SC, it should be noted that the MC adopted were those established during the effective period of the Interlinked Urban Operations, from 1995 to 2002, which promoted a considerable increase of high-rise development and density in the Praias da Baía. The resulting pattern of urbanization in the region prompted strong criticisms of Interlinked Operations.

**Box 9: OODC Summary – Porto Alegre, RS**

Instrument (legal form)	The SC was established by law in 1994 and subsequently was absorbed into the Master Plan for Urban and Environment Development (PDDU); Supplemental Law No. 434 dated 1 December 1999.
Design of the Instrument	The SC is designed as a for-fee permit for purposes of construction in densely occupied areas, using public building stocks. These stocks are defined as the difference between the basic stock of each block (sum total of the buildings planned according to the basic index) and its densification limit (maximum density of 260 households per hectare in each block).
Objectives	The law defines the SC as a development instrument of intervention in the real estate market in compliance with the social function of property. However, its more visible role is to generate revenues from full utilization of the infrastructure in the areas thus equipped.
Application date	The SC started operating after the approval of the PDDU. The SC auctions functioned from 2001 to 2003, and the other direct purchase modalities continued to function, although with less demand.
Land utilization indices	The indices are defined as private (basic) and public (Alienable Identifiable Index—IAA). The indices, established in Appendix 6 of the Master Plan, are variable. The Private Utilization Index (IA) ranges in general from 1.0 to 2.4 in very dense areas (except in certain special mixed areas, where they range from 0.65 to 2.5), and the maximum indices (IA + IAA) range from 1.0 (where the IA is 1.0 and there is no IAA) to 3.0 (except in specific areas where it may reach 4.0 through Special Projects). Since the SC stocks are limited by block, they are acquired by means of auctions. Built-up areas where density cannot be increased (areas of incentive for complementary activities, general services, and support for construction) do not enter into the calculation up to 50 percent of the maximum index. But the maximum index can be exceeded by means of non-density SC, governed by a system of direct acquisition, as well as adjustment SC, a third modality that affects up to 10 percent of the area of the project and cannot exceed 100 square meters.
Territorial extension	The SC applies throughout the zone defined as Area of Intensive Occupancy, although there are a few small areas (01 and 03) without IAA. In these areas the private indices are, respectively, 1.0 and 1.3.
Formula for calculating the charge	The minimum square-meter SC price is based on the unitary market value of the property divided by its utilization index. This price is calculated for each block by the Treasury Department using as a basis the estimated market price. The market price is estimated using a statistical model applied to samples of asking prices and sales prices for the sides of each block. If the prices of the various sides are similar, the basic value is the average of these prices. If prices differ greatly, the basic value is 85 percent of the side having the highest price. For the densification SC, the figure used is 100 percent of this calculation, while for the non-

	densification SC and the adjustment SC, the figure is 50 percent.
Use of revenues collected	Although provision was made for a Fund, it was never established, and the revenues generated by the SC go into the general budget of the municipality. Rough estimates by the Department of Municipal Planning indicate that the average annual SC revenue has been R\$4 billion for the three years during which they were fully applied (2001 to 2003). In 2004 and 2005 there were no auctions, and revenues by direct acquisition (SC non-densification and adjustment) fell considerably.
Social-interest monitoring	Monitoring is done by the Municipal Master Plan Council (CMDUA), which has 28 members, including 9 from areas of government, 9 from a variety of entities, and 9 from the community. They are responsible for determining building stocks, approving SC values per block semi-annually, and (theoretically) planning for the application of the funds, with priority being given to housing policy. Since the SC revenues are part of total municipal revenues, which are subject to participatory budgeting, the instrument is deemed to be meeting its social-interest goals.
Effect on price of land and the real estate property tax	Neither the Department of Planning nor the Treasury recognizes any relationship between the application of the SC and the price of the land. Also, no mention was been made of any relationship of the SC to the real estate property tax revenue.
The instrument and the recovery of incremental land values	The idea of value capture exists in essence, since the maximum indices projected are related to existing infrastructure capacity, considered to be in excess of the private indices available (which are historical, that is, they are the prices on which the owners always count). In practice, however, there is no direct relationship.
Comments	<p>SC in Porto Alegre originated in the Municipal Organic Law, and was established and regulated by Supplemental Law No. 315 of 1994. Its inclusion in the 1999 PDDU and its implementation followed extensive negotiation with the construction industry and developers, which greatly reduced potential negative reactions.</p> <p>The allocation of private indices legally belonging to property owners facilitated acceptance and absorption of the idea of alienable public indices.</p> <p>Density calculations are extensive, and they resulted in a series of definitions embodied in the Master Plan. Some of them are not easy to understand, and ultimately have not been used. (For example, the SC is defined as having as a base 20 households per hectare where there are centralities, 30 households per hectare where an effort is being made to strengthen centralities; gross and net densities are also specified for each <i>Unidade de Estruturação Urbana</i> (UEU) [Urban Structure Unit] and for each block, stocks for each UEU and for Macro Zones, in addition to ideal minimum sizes of property for each household).</p> <p>There is a limited stock of densification SC per UEU and per block, which is why provision is made for holding of auctions (initially objected to by the construction industry). Owners of projects previously analyzed</p>

	<p>by the Municipal Planning Secretariat (SPM) participated in the auctions. Per-block values and areas not subject to SC acquisition are published semi-annually. One article of the Master Plan provides for use of reserve stocks when stocks are exhausted. This article is on the list of necessary revisions of the Master Plan in order to improve the use of the instrument. SC auctions have been suspended since 2004 for purposes of re-evaluation. The principal objections come from the general population, with the help of the media, which (incorrectly) blame the instrument for excessive high-rise development.</p> <p>The SPM acknowledges the existence of a visual imbalance when a single project on the block acquires a large part of the additional building stock available.</p> <p>Revenue from non-densification SC has fallen considerably. It was R\$600,000 in 2001 and 2002, reached a peak of R\$1.05 million in 2003, then fell to R\$470,000 in 2004 and R\$250,000 in 2005. The revenue from adjustment SC reached almost R\$1.3 million in 2003, then fell to around R\$880,000 in 2004 and R\$560,000 in 2005. These modalities are marketed by the <i>Unidade de Desapropriação e Reserva de Índices</i> (UDRI) [Expropriation and Indices Reserves Unit]. One of the principal factors in the weakening of the SC is its direct competition with the TDC, an instrument also implemented by the Master Plan and used not only for purposes of preservation and restoration of historic buildings but also by the government as a medium of exchange in expropriations. In addition to the problems caused by the possible combined use of SC and the TDC in the same building, the TDC is a private-circulation instrument (sold even through the newspapers) that is regulated by the government only to the extent of providing the equivalences between areas of origin and areas of use. Thus, it is more attractive than the SC, in which building rights have to be acquired from the government, with all the bureaucratic steps that this involves. Furthermore, SC is acquired for a specific project, while the TDC is a title that applies to an entire Macro Zone, and sometimes to an entire city; it can be sold as often as desired.</p> <p>The construction of Perimetral III (Ring Road III), starting in 1997-1998, placed a large stock of TDC on the market, since 90 percent of the expropriations were paid in this way. The SPM is considering limiting the number of new TDC available each year.</p>
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**Box 10: OODC Summary – Salvador, BA**

Instrument (legal form)	The OODC is one of the urban policy instruments established in the Master Plan (PDDU – Law No. 6586/2004), in conformity with the guidelines of the EC. However, Article 133 of the PDDU made its implementation contingent on a reduction of the stock of TRANSCON utilization rights, in effect since November 1987, to the minimum balance of 20 percent of the existing total after the PDDU went into effect. In addition, Salvador operates with the charge specified in the Organic Law
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	of 1990 and governed by Decree No. 10.772/1994. The SC (modality with specific purposes) is established in Law No. 4.487/92.
Design of the Instrument	<p>Appendix A.73 of the PDDU (Requirements and Parameters for Application of Urban Policy Instruments) provides that growth of building potential will be approved independent of the analysis by the competent agency when the Basic Coefficient (BC) is exceeded by up to 10 percent, and only at the discretion of the competent municipal agency when said growth falls between this 10 percent and the Maximum Coefficients (MC) specified in section A.74.4. Attachment A.73 also states that the granting of a Change of Use permit will be approved in Joint-Venture Urban operations, or in the form of a Study of Neighborhood Impact, when the project complies with the spatial guidelines of the PDDU and after a hearing by the <i>Conselho Municipal de Desenvolvimento Urbano</i> (CMDU) [Municipal Urban Development] Council.</p> <p>The charge (“<i>Compensação</i>”) specified in Article 86 of the 1990 <i>Lei Orgânica Municipal</i> (LOM) [Municipal Organic Law] is the instrument by means of which any urban-development parameter that is more permissive than those established in laws in effect after approval of the LOM can be used by means of payment of a charge in cash. Thus it seems like there was an early form of OODC before the OODC was specifically introduced in the 2004 PDDU.</p> <p>The SC refers to the additional square meters in the top floor of existing structures and structures to be constructed.</p>
Objectives	Article 130 of the 2004 PDDU provides that the urban policy instruments specified (among them the OODC) aim to ensure compliance with the social function of property in conformity with Articles 182 and 183 of the Federal Constitution and Federal Law No. 10.257 of 10 July 2001— the EC. The LOM of 1990 establishes for the city the same urban policy instruments later approved in the EC, with the charge system (“ <i>Compensação</i> ”) instead of the OODC, in amounts that will correspond to the economic gain generated by use of the new parameters. In other words, essentially the same as the OODC. The SC is basically an instrument of legalization of pent-houses.
Application date	The OODC as defined in 2004 was never applied. The charge system (“ <i>Compensação</i> ”) has been in effect since 1994.
Land utilization indices	Properties for which the BC is expanded in relation to the coefficient in effect pursuant to Law No. 3374/84 and its subsequent amendments will have to use the instruments of Transfer and OODC as payment for the differential in construction potential resulting from this new parameter (single paragraph of Article 121). The BC specified in the 2004 PDDU Master Plan are: 1.00 for Exclusively Single-Family Residential Zone; 1.20 to 2.00 for Exclusive Residential Zone; 0.30 to 2.00 for Predominantly Residential Zone; 0.80 for Industrial Zone; 2.50 for Municipal Centers; 1.50 and 2.00 for Municipal Sub-Centers; 1.00 to 2.50 for Corridors of Diversified Activities; and 0.50 for Specific Mineral

	<p>Extraction Zones.</p> <p>Maximum Utilization Coefficients (CAM) range from 1.2 to 4.0 when it does not require proportionality relative to the Comfort Quota and from 1.5 to 3.0 when there is a requirement for proportional increase of the Comfort Quota. The Comfort Quota, stipulated in the Building Code, is the relationship between the useful area of a residential property unit and its number of inhabitants.</p>
Territorial extension	The OODC, like the charge system (“ <i>Compensação</i> ”) is a mechanism applicable everywhere in the city.
Formula for calculating the charge	<p>The formula for calculating the OODC is still pending regulation. For the charge system (“<i>Compensação</i>”) there are specific formulas for modification of the utilization index (P1) and what is called permissive use (P2):</p> $P1 = (Atc/IU) - At \times p/m^2; \quad P2 = p/m^2 \times 0,5 \times At,$ <p>In which <math>Atc</math> = Total area developed for purposes of IU; IU = original utilization index for zone (less permissive); <math>At</math> = land area</p>
Use of revenues collected	The revenues obtained from use of the instruments referred to in the 1990 LOM, which are the same in the 2004 PDDU, are intended for recovery of historical centers, construction of low-cost housing, tenure legalization, and infrastructure projects in areas occupied by low-income populations, and erosion prevention in hillside slopes.
Social-interest monitoring	Article 92 of the LOM provides for participation by the community.
Effect on price of land and real estate property tax	There are no studies of the effect of the charge system (“ <i>Compensação</i> ”) or the future OODC, or of the TDC, on property prices or on the base for the real estate property tax.
The instrument and the recovery of incremental land values	The OODC and the charge system (“ <i>Compensação</i> ”) are legally defined as instruments for capturing the valorization resulting from the use of additional building area above the BC (OODC) and exceeding the indices in effect as of the date of approval of the LOM.
Comments	<p>The introduction of the TDC in November 1987 TDC and the charge system (“<i>Compensação</i>”) in August 1994 makes Salvador one of the pioneer cities in the application of urban development instruments based on separation of the right of ownership and the right to build. In addition, the structure of the 2004 Master Plan indicates a clear affiliation with the urban development culture that produced the EC. So it is difficult to understand why the city seems relatively oblivious of the use of the OODC as a value capture instrument.</p> <p>Far from reflecting a historical lag in modernization of urban planning and management tools, the non-application of the OODC as established in the 2004 PDDU Master Plan results from a conflict of interests at the</p>

	<p>heart of this modernization: the supply of additional building potential by means of the OODC, proposed in the 2004 PDDU Master Plan, conflicts with the earlier private possession of a significant stock of TRANSCON certificates issued since 1987 pursuant to Law No. 3.805 and, in some important cases, obtained by means of court rulings brought against the municipality.</p> <p>According to the persons interviewed, one of the alternatives under discussion in order to make viable the application of the OODC is the delimitation of different areas of application for each of the two instruments. As stated in the PDDU, the OODC is automatically applicable up to the limit of 10 percent of building potential above the BC. Utilization pursuant to permit of the MC specified in the legislation depends on analysis by the competent agency and changes in use depend on the CMDU. The very uncertainty of this system may be reflected in the real estate market and may make it difficult to operate the OODC as an urban planning tool.</p>
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**Box 11: OODC Summary – Santo André, SP**

Instrument (legal form)	The OODC was established in Santo André in the Master Plan, Law No. 8696 dated 17 December 2004.
Design of the instrument	The design of the OODC follows the guidelines established by the EC and emphasizes redistribution, in relation not only to capture the incremental land values but also to reorganize city densities according to the available infrastructure capacity.
Objectives	The law states the following objectives for the OODC, among the general urban policy objectives: guarantee of the equitable capture of the costs and benefits resulting from the urbanization process, recovery and transfer for the community of land valorization resulting from public sector interventions; and adaptation of densities to the capacity of the physical environment, with a view to use areas well equipped with infrastructure and to prevent overburdening existing networks.
Application date	After approval of the PDDU, a time frame was established for the drafting and approval of the Law on Use, Occupancy, and Land Subdivision in the Urban Macro-zone, approved in May 2006. Application of the instrument began after that.
Land utilization indices	The OODC affects specified perimeters (zones) of the city, and the basic coefficient (BC) varies depending on the type of use (single-family residential use, multi-family use, non-residential use), ranging between 1.34 and 3.00. The maximum coefficient (MC) ranges from 2.00 to 4.00. In the exclusively industrial zone the BC = 1.50 and the MC = 3.00.
Territorial extension	The instrument will be applied in the Urban Macro-zone, with the exception of the Urban Recovery Zone and the Environment Protection Macro-zone.
Formula for calculating the	The formula to calculate the OODC charge takes into account the fiscal value of the property, as follows:

charge	$BE = At \times Vm \times Cp \times Ip$ <p>Where: BE is the economic gain; At is the area of land; Vm is the fiscal value per square meter of land; Cp is the difference between the utilization coefficient claimed and the BC; and Ip is the planning index, which ranges from 0.3 to 0.5. (The Law on the Use, Occupancy, and Land Sub-Division established the planning index at 0.3 for the first two years of application and at 0.4 thereafter.</p>
Use of revenues collected	The revenues will be used for the production of social-interest housing throughout the municipality and the installation of infrastructure and public facilities in the Urban Recovery Zone, a zone described as a pocket of poverty in the Urban Macro-zone.
Social-interest monitoring	Social-interest monitoring is done by the Municipal Council of Urban Policy.
Comments	<p>In 2007 Santo André does not yet have any instance of application of the instrument, and the municipal technicians say that there will be a lag in feeling the effects of application of the OODC, since there was a race to approve projects during the moratorium that ended in 2006.</p> <p>The assessment is that the failure to introduce a single basic unitary index has not been a major problem in Santo André because the focus of the strategy of the government was to change the urban-development culture of the city. When payment of a fee above a specified index level was established, the OODC concept was introduced. It will be absorbed by the real estate market, the municipal technicians, and municipal council members, helping to create a new urban-development culture.</p> <p>Persons interviewed also expressed the need for a study and for a better understanding of the interaction between the various instruments proposed by the EC. Santo André is beginning to apply several of these instruments simultaneously, including the OODC, the TDC, and the notification of under-utilized buildings located in ZEIS areas.</p> <p>The city had prior experience with the sale of exceptional urban-development parameters through Urban Operations based on the <i>Lei de Desenvolvimento Comercial</i> (LDC) [Commercial Development Law] and the <i>Lei de Desenvolvimento Industrial</i> (LDI) [Industrial Development Law], or through isolated sale of coefficients or change of use through specific legislation. This practice existed between 1999 and 2005, and is no longer in effect.</p> <p>An interesting aspect of the experience observed in Santo André is that when the OODC was established, the administration revised the coefficients in effect and decided to maintain or even decrease the MC in most of the city. In some zones, even the application of the OODC is not expected to reach previous MC. The building potential was increased only for industrial use and vertical multi-family residential use in some zones. The justification for this is that the potential was excessively high and was rarely used, and there was a desire to prevent the creation of new densely populated areas, as had happened in various neighborhoods of the city.</p>



**Box 12: OODC Summary – São Luis, MA**

Instrument (legal form)	The OODC was established as <i>Operações Urbanas</i> (OP) [Urban Operations] in 1992. The Law that approved the Master Plan (Law No. 3252/1992), the Land Sub-Division, the Zoning Law (Law No. 3253/1992), and the Law that approved the OP (Law No. 3 254/1992) were published together.
Design of the Instrument	The OP is understood as a procedure whereby the municipality increases the Maximum Building Area (ATME) and the Maximum Building Height (GM) of individual parcels, based on proposals by owners, once the owners undertake to finance infrastructure and urban improvements in exchange for the changes. The law first defines where OP can be applied and with which criteria should be used (BC and MC). The OP is not intended for isolated application like the “Interconnected Operations” used in other municipalities. The municipality can also modify the ATME and the GM of municipal-owned parcels, opening a public competition for interested parties, and having the charge paid in the form of infrastructure and urban improvements. This alternative has not yet been used. The OPs were established for use in areas amenable to high-rise development, where there may be future demand for developed, and/or where the municipality foresees expansion of the urban area.
Objectives	The OP aim is to finance construction of public facilities (schools, nursery schools, markets, hospital, etc.), social-interest housing, and urban infrastructure (streets, green areas, and water, electricity, sewerage, and telephone networks). It can also be used for the construction and recovery of municipal assets (buildings, public areas, and monuments), or to raise revenues. Basically, the objective is to increase municipal revenues.
Application date	The Municipality of São Luis has been applying the SC since 1995.
Land utilization Indices	The utilization indices (BC and MC) are variable depending on the zone and the traffic corridor. The basic coefficients are high in some areas: 2.1 and 2.4 in areas of high demand (ZR7 and ZR9) and 3.4 (in Corridor CS9). In terms of GM, for example, an OP permits the transition from 10 to 15 storeys (ZR9 or ZR7) and from 12 to 15 (tourist area).
Territorial extension	By law the OPs can be used in 30 percent of the urban area and in 10 percent of the total municipal area. The OP can be used only for residential development and cannot be used in business centers. Ninety-five percent of all permits for residential buildings are subject to OP chrges. The OP is not used for social-interest housing projects.

<p>Formula for calculating the charge</p>	<p>The formula to calculate the OP charge was established by a Commission created by Law No. 3254/1992. The formula is based on assessed values established by the <i>Secretaria Municipal de Terras, Habitação, Urbanismo e Fiscalização Urbana</i> (SEMTHURB) [Municipal Secretariat of Land, Housing, Urban Development and Urban Supervision]. These assessed values are above fiscal values and slightly below market prices and are updated annually. These prices are updated based on the same indices used for the generic schedule of assessed values of the Municipality. The formula for calculating the OP charge uses a virtual parcel and has no reduction factors:</p> $T.V. = [ APT \times GSC ] \times V/M^2 / ATME$ <p>Where T.V. –virtual parcel; APT - typical floor area; GSC - SC maximum building height = number of storey to be increased; ATME – maximum total area developed; V/M<sup>2</sup> - updated market value per square meter of land.</p> <p>Parties interested in changes the indices pay the charge either in kind or in cash. In kind payment are made in the form of construction projects specified in the law (calculated by public prices) at values equivalent to 100 percent of the value of the virtual property corresponding to the additional developed area being granted. Payment in cash is equivalent to 80 percent of the value of the virtual parcel.</p>
<p>Use of revenues collected</p>	<p>The revenues from the instrument go into the general municipal treasury, since there is no specific fund. The use of such funds is specified in Law No. 3.254/1992. The funds have been applied in the development of public areas, chiefly squares on the outskirts of the city and recovery of green spaces.</p> <p>Revenues were: In 2005, there was no payment in kind; payments in cash totaled R\$232,868; in 2006, payments in kind totaled R\$38,674; payments in cash totaled R\$322,110.</p>
<p>Social-interest monitoring</p>	<p>The Municipal Commission that ultimately approves the application of the OP is composed of five members representing the following entities: <i>Sindicato da Construção Civil do Maranhão</i> [Civil Construction Union of Maranhão]; the City Council; the office of the Mayor; SEMTHURB; and the Brazilian Institute of Architect (IAB). The Commission is also responsible for social-interest monitoring of the instrument. A representative of the agencies responsible for the Historic Properties and/or Protection of the Environment of the City, of entities on the Federal and State levels may also be invited to join the Commission. Utilization of the OP benefits (increase in developed area and size) is not a right accorded by the law that established it. Its application is contingent on studies (including environment studies) and approval by the Commission. At least one case is reported in which because of a negative opinion the OP was not applied.</p> <p>The allocation of the funds is published in the newspapers, in the form of a report on acts of the Municipal Commission, and the charge is disclosed in a newspaper advertising campaign.</p>

Effect on price of land and the real estate property tax	The municipal government does not identify relationships between the application of the OP and real estate prices. It also does not indicate that there is a negative relationship between OP and real estate property tax revenues.
The instrument and recovery of incremental land values	The idea of applying the instrument to recover incremental land values due to public interventions does not appear in the legislation or in the vision of the municipal technicians interviewed. What prevails is the idea of the instrument as a potential mechanism to finance urban infrastructure.
Comments	<p>SEMTHURB values the application of the OP despite its low revenues. The instrument has made it possible to build facilities needed by the very-low-income population and resulted in improvements in their neighborhoods.</p> <p>The lack of a fund to channel the funds (proposed and not approved) is a problem that will have to be resolved in the next amendment of the legislation. Without a fund the OP payments have to be used immediately and cannot be combined. This means that such funds cannot be used for large projects. The OP operates through the Coordination of Urban Operations and New Projects, which has several projects in stock in which OP funds can be used.</p> <p>SEMTHURB does not consider the instrument as having an urban-development function. For this purpose there is the zoning law (Law No. 3253/1992), which raised considerably the indices in areas open to densification.</p> <p>In the future, however, the administration plans to establish direct links between the OP and the possibility of high-rise development in neighborhoods along the coastline, by establishing progressive charges (i.e. greater utilizations with higher rates for calculating the charges). Although provision was made in the 1992 Master Plan for the transfer of construction potential, regulations were never established and this transfer instrument is not being used.</p> <p>The weak point of the application of the OP in São Luis is its low revenues and the lack of a specific fund, factors acknowledged by SEMTHURB. The application of the instrument is being improved, notwithstanding objections and pressures for establish higher MC in specific areas.</p>

## Appendix 2 – Summary Questionnaire of Experiences<sup>3</sup> and Comparative Tables

### Characteristics of the OODC

- 1) Single (IBU) or variable (IBV) basic index? IBU/IBV. If single, is it unitary (1.0)? U/N/-
- 2) Maximum single index (MU) or maximum variable index (MV)? MU/MV. Higher maximum index? (number)
- 3) Did the indices used as basic change previously existing indices? S/- [yes/no]. If changed, were they reduced (R), increased (A), or variable (V), depending on the areas of application? R/A/V
- 4) Does the OODC currently apply to the entire city/urban area? T/- [entire city/no]
- 5) Is there monitoring of the building stock on a per-area basis? N/E
- 6) Is there only a general form (G) of OODC, or is there a variety of forms (V) (e.g. differentiated criteria for construction in open areas etc.)? G/V
- 7) Is the acquisition made directly (D), via auctions (L), or both (A)? D/L/A
- 8) What value is used as the calculation base? The fiscal value (VV), market price (PM), the CUB (CC), or prices specifically calculated (PE)? VV/PM/CC/PE
- 9) Are there correction factors, adjustment factors, or reduction factors? S/- [yes/no]
  - a. Are correction factors included in the calculation formula? Fc
  - b. Adjustment factors depending on use, types of grants, or charges? Fa
  - c. Are there reduction factors that are politically negotiated? Fr
- 10) Is the calculation formula and/or collection formula progressive? P/-
- 11) Taking into account adjustment, correction, and reduction factors, the fee collected represents what percentage of the basic value calculated? (%)
- 12) Is the charge exclusively monetary? M/-. If not, what forms of payment are accepted?
- 13) Does the use of the funds, or part of the funds, have a definite social-welfare orientation toward low-income groups or? S/P/-
- 14) Is there a specific Fund for the moneys? F/-
- 15) Was provision made for some form of gradual implementation or transition? T/-

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<sup>3</sup> In the case of negative answer or no answer, the dash (-) was used for better display of the tables.

### **Definition and Objectives**

- 16) Was the OODC introduced before (A) or after (D) the EC? A/D. If before, was it regulated before (RA) or after (RD) the EC? RA/RD
- 17) In the current Master Plan, is it called OODC, SC (SC), or other name (O)? OODC/SC/O
- 18) What are the principal objectives? Urban development (after reorganization) (U), tax objectives (F), or both (A)? U/F/A
- 19) Were effects on land values in the city expected? N/-
- 20) Do maximum indices refer to the existing infrastructure capacity (IE) or to projected capacity to be financed via densification (IP)? IE/IP
- 21) Was it planned as a major source of funds? S/- [yes/no]. Were the funds obtained for a variety of purposes (V) or a single purpose (V/specify single purpose)?
- 22) Is the utilization period limited? L/-
- 23) Does the TDC exist? TDC/-. If so, is this merely specified (P) or is it regulated (R)? P/R
- 24) Are there OP (consortiums, joint ventures, etc) OU/-. If so, are they simply specified or are they regulated?
- 25) Are there other supplementary instruments that form a system (or were introduced specifically) IC/- [supplementary instruments]

### **Development and current situation**

- 26) Was the OODC applied? S/N [yes/no]. When did it go into effect? (year)
- 27) Is it currently being applied? S/N [yes/no]. Is it currently being reviewed? R/-
- 28) If it was specified in the TDC, did it go into operation? S/N/-. If it did, starting from when? (YEAR)
- 29) Is the TDC currently in effect? S/N/-
- 30) Are there known problems of overlapping in the concomitant application of the OODC and the TDC? S/- [yes/no]
- 31) If provision was made for OP, were they applied? S/N/-. If so, starting from when? (YEAR)
- 32) Did the application of the OODC arouse negative reactions? S/-. If so, from whom? Real property developers (E)? Land owners (P)? The community (C)? (Other parties? E/P/C

- 33) Were inappropriate results noted? S/N. If so, were they in terms of urban development (U) Tax results (F)? Both (A)? U/F/A
- 34) Are changes in the OODC planned in connection with revision of Master Plans or adaptation of the Master Plans to the Statute of the City? S/N
- 35) Are changes in the use of the TDC and/or the OP planned? S/N/-

**Table 1: Characteristics of OODC**

	1	1a	2	2a	3	3a	4	5	6	7	8	9	9a	9b	9c	10	11	12	12a	13	14	15
Alvorada	IBV	-	MV	5,0	-	-	-	N	G	D	VV	S	-	-	Fr	P	40% <sup>4</sup>	M	-	-	-	T
Blumenau	IBV	-	MV	3,9	-	-	T	N	V	D	PM	-	-	-	-	-	100%	-	land	-	F	-
Cpo. Grande	IBV	-	MV	6,0	-	-	T	N	V	D	PM	-	-	-	-	-	100%	M	-	P	F	-
Curitiba	IBV	-	MV	6,0	-	-	-	N	G	D	VV	S	-	Fa	-	-	75% - 15%	-	land	S	F	-
Florianopolis	IBU	U	MV	4,1	S	R	T	N	G	D	CC	S	Fc	-	-	P	100%	M	-	-	F	-
Natal	IBU	N	MV	5,5	S	R	-	N	V	D	CC	-	-	-	-	-	100%	-	land	S	F	-
Niteroi	IBV	-	MV	7,5	S	R	-	N	G	D	VV	S	Fc	-	-	P	variable <sup>5</sup>	M	-	P	F	-
Porto Alegre	IBV	-	MV	3,0	-	-	T	E	V	A	PE	S	-	Fa	-	-	100% and 50%	M	-	-	F	-
Goiania	IBU	U	MV	3,5	S	R	T	N	G	D	VV	S	-	-	Fr	-	20%	-	land/ proj	-	F	T
Salvador <sup>6</sup>	IBV	-	MV	6,0	-	-	T	N	V	D	PM	-	-	-	-	-	100%	-	land/ proj/ serv	-	-	- <sup>7</sup>
Santo André	IBV	-	MV	4,0	S	V	-	N	G	D	VV	S	Fc	-	-	-	30% <sup>8</sup>	M	-	S	F	T
São Luis	IBV	-	MV	4,2	S	V	-	N	G	D	PE	S	-	Fa	-	-	80% and 100%	-	pr	S	F	-

<sup>4</sup> The reduction factor was 50% in 2005, and was increased to 60% in 2006.

<sup>5</sup> The correction factors are established in the Regional Urban Plans (PURs), and are different for each area of the city.

<sup>6</sup> The answers refer to the Consideration (Articles 85, 86, and 87 of the Charter [05 April 1990]).

<sup>7</sup> There was none for the “Consideration” analyzed here. A “moratorium” (see case report) was specified for the OODC approved in 2004.

<sup>8</sup> The planning index will be applied at the rate of 30% in the first two years, at 40% thereafter.

**Table 2: Definition and Objectives**

	16	16a	17	18	19	20	21	21a	22	23	23a	24	24a	25
Alvorada	A	RD	SC	A	N	IP	S	priority projects	-	-	-	-	-	-
Blumenau	A	RA	SC	F	N	IE	-	equipment	-	TDC	R	-	-	-
Cpo. Grande	A	RD	O <sup>9</sup>	F	N	IE	-	V	L	TDC	R	-	-	IC
Curitiba	A	RA	SC / OODC	A	N	IE	-	low-cost housing	-	TDC	R	OU	P	IC
Florianópolis	A	RA	SC <sup>10</sup>	F	N	IE	S	infra-structure	-	TDC	R	-	-	-
Natal	A	RA	OODC	F	N	IE	S	V	L	TDC	P	OU	R	IC
Niteroi	D	RD	SC	A	N	IE	-	V	L	TDC	P	OU	P	IC
Porto Alegre	A	RA	SC	F	N	IE	S	V	L	TDC	R	OU	R	IC
Goiania	A	RA	O <sup>11</sup>	F	N	IP	S	V	L	TDC	R	-	-	-
Salvador	A <sup>12</sup>	RA	O	F	N	IE	-	V	-	TDC	R	OU	R	IC
Santo André	D	RD	OODC	A	N	IE	-	V	L	TDC	R	OU	R	IC
São Luis	A	RA	O	F	N	IE	-	public works	-	TDC	P	OU	R <sup>13</sup>	-

<sup>9</sup> Negotiated Urban Development; the Outorga Onerosa da Construção is used for Legalization of Buildings.

<sup>10</sup> Rate Remuneration of Solo Criado.

<sup>11</sup> Solo Criado or License for fee.

<sup>12</sup> Considering here the instrument of the analysis. The OODC was included in the Management Plan for 2004, but is not in effect.

<sup>13</sup> The grant is called Operação Urbana in the Management Plan and in the law.



**Table 3: Development and Current Situation**

	26	26a	27	27a	28	28a	29	30	31	31a	32	32a	33	33a	34	35
Alvorada	S	2005	S	-	-	-	-	-	-	-	S	O	N	-	N	-
Blumenau	S	1997	S	R	S	1997	S	S	-	-	-	-	N	-	S	S
Cpo. Grande	S	1995	S	R	N	-	S	-	-	-	-	-	N	-	S	S
Curitiba	S	1990	S	R	S	1986	S	S	N	-	-	-	S	U	S	S
Florianópolis	S	1989	S	-	S	1985	S	-	-	-	S	E	S	F	N	S
Natal	S	1994	S	R	N	-	N	-	N	-	-	-	S	A	S	S
Niteroi	S	2002	S	-	N	-	S	-	N	-	-	-	S	F	N	N
Porto Alegre	S	2001 <sup>14</sup>	N <sub>15</sub>	R	S	1980	S	S	S	1990	S	C	S	U	N	S
Goiania	S	1995	S	R	S	1990	S	S	-	-	S	E	S	A	S	S
Salvador	S	1994	S	-	S	1998	S	S	N	-	S	O <sup>16</sup>	N	-	S	S
Santo André	N <sup>17</sup>	2006	S	-	N	-	S	-	S	1999	S	E	N	-	N	N
São Luis	S	1995	S	R	N	-	N	-	S <sup>18</sup>	1995	-	-	S	A	S	N

<sup>14</sup> The Solo Criado was introduced in 1994 and regulated in the PDDUA in 1999, began to be used in 2001.

<sup>15</sup> In fact this suspends only the auction, but this was the principal form of Solo Criado existing in the municipality.

<sup>16</sup> The OODC aroused negative reactions in Salvador among the holders of Transfer Certificates, who obtained approval by the Chamber of the legislative provision that rendered the Grant enforceable only after reduction of the stock of Transfer Certificates to less than 20% of the existing certificates.

<sup>17</sup> The period for the start of the application was scheduled for May 2006.

<sup>18</sup> The grant, which in São Luis is called Operação Urbana (OU).

## **Appendix 3 – Research Methodology and Criteria for Selection of the Cities**

### **Bases**

The work is based on a review of the literature on the concepts involved, the development of experiences, and what has been learned with respect to the OODC.

Although the OODC appears to be an instrument already largely present in the urban planning legislation and Master Plans of the large and medium-sized Brazilian cities, as indicated in the research projects of the *Instituto Polis* and other institutions already completed and in progress, the cities that have already accumulated considerable experience with its application are few in number, chiefly because of the following factors:

- i. In many cases the application of the OODC presupposes regulations that have not yet gone into effect (basic and maximum index tables, establishment of local “constants” for application of the formula for calculating the charge, etc.);
- ii. In some cases application of the OODC was postponed for an explicit or agreed “moratorium” to allow the agents involved (the real estate market, municipal employees) to adapt;
- iii. In cases in which the OODC is already applicable, not enough time has passed to permit the accumulation of a substantial body of experience. The fact is that many cities began the process of implementation of the instrument after its establishment in the EC.

Consequently, the sampling of cities to be studied will tend to be reasonably unequal in terms of stage of development of *Outorga Onerosa* application.

Another expected characteristic of the group of municipalities to be selected for the project, based on prior participation in other research projects completed or ongoing is diversity of understanding, objectives, and applications.

In any case, this research project proposes to be chiefly qualitative in relation to the application of the OODC, a fact that is reflected in the questions listed in the interview orientation questionnaire. The anticipated result is increased understanding, in terms of functionality and effectiveness, of the OODC mechanism as an instrument of urban planning, community recovery of the valorization of urban land, and financing of social-interest development programs. It is understood that the predominantly vertical nature of this research makes the existence of a complete and relatively homogeneous research universe less relevant.

### **Method of development of the case studies**

The research project will start with the selection of 12 case studies, which will be the subject of personal contacts and local in-depth interviews by a research specialist (one of the four team researchers in this project). The interviews will be transcribed and presented to the other researchers for discussion and commencement of analysis. The cases will be organized and presented in a format designed for their disclosure to municipalities as a tool

for their respective processes of revision of Master Plans and regulation of the OODC and its implementation.

Each researcher will be responsible for monitoring all aspects of the development of the selected cases. A basic questionnaire prepared with contributions by the entire team will contain questions selected by each researcher and submitted in advance of the visit and interview. Changes will also be made in the questionnaire during its presentation to the other GESVAT Program researchers.

The questionnaire as well as the format and contents of the interviews will undergo changes during the execution of a pilot project designed to provide the team of researchers with opportunities for contact and for learning about the problems of applying the *Outorga Onerosa* in day-to-day municipal management, for example problems of theoretical support in management practice and possible administrative shortcomings in the theoretical and juridical concepts of the *Outorga Onerosa*. The municipality of Niterói was selected for this purpose because of its proximity to the research base and because it is one of the principal examples of application of the OODC in Brazil.

Basically, the research methodology includes the following stages:

- i. Establishment of criteria for the selection of the cities to be studied;
- ii. Preparation of the questionnaire script for guidance in the interviews;
- iii. Initial contacts with the cities;
- iv. Selection of the cities and changes in the questionnaire, with the collaboration of the GESVAT Program;
- v. Dispatch of questionnaire and holding of interview - pilot municipality;
- vi. Changes in questionnaire, format, and contents of the interviews;
- vii. Confirmation of list of cities selected; scheduling;
- viii. Field work in municipalities selected;
- ix. Transcription of interviews;
- x. Preparations of summary reports of cases;
- xi. Work meetings for presentation and discussion of experiences;
- xii. Analysis and systematizing of cases;
- xiii. Comparative evaluation of experiences.

### **Criteria for Choice of Cities**

The cities will be chosen according to a group of general criteria designed basically to ensure maximum socio-geographical distribution of the sampling, adapted to the restrictions presented in the Methodology.

Basic resources to be consulted:

- i. Specialized bibliography;
- ii. MUNIC – IBGE (2001) Research Project;
- iii. Polis - Mackenzie (2005) Research Project;
- iv. Polis - GESVAT Research Project (ongoing);
- v. Institutional and personal contacts.

Basic criteria to be observed:

- i. Size of city (sampling distributed among metropolises and large and medium-sized cities);
- ii. Regional distribution;
- iii. Significance on the national scene in terms of urban policy;
- iv. Various types of understanding and application.

Consideration of restrictions:

- i. Possible inclusion of cities with experience in the application of “atypical” types of OODC, such as legalization of illegal additions in exchange for payment of a charge, granting of permit in exchange for facilities, etc.;
- ii. Possible inclusion of “control cases,” for example in cities in which the basic coefficient is so high that the occurrence of an OODC request is improbable;
- iii. Possible inclusion of cases in which there has not yet been any experience with OODC but in which there is a rich and well-documented process of its establishment/regulation, and where in addition there is experience with an instrument of the same type (OP, Interlinked Urban Operations).

### **Contents of Intermediate Product**

Transcription of interviews;

Principal characteristics of and differences and similarities in the cases raised;

Preliminary results: analyses and comments on the cases studied.

## **Contents of Final Product**

Evaluation and comparative panorama of municipal experiences:

- i. Opportunities and limitations;
- ii. Principal constraints and challenges;

Suggestions for establishment of national guidelines for application of the OODC;

Policy recommendations for critical questions.

## Appendix 4 – Questionnaires and Guide for Interviews

As specified in the Methodology, the researcher responsible for the interview will first dispatch a group of questions selected from among those presented below, according to the case to be evaluated. The other questions can serve as orientation for the holding of the interviews.

### Basic

- i. Is inclusion of the OODC in the Master Plan automatic, or are regulations established?
- ii. What application criteria were established in the Master Plan and/or in the regulations? (Indices, areas of application, calculation formulas, types and allocations of charges, exemptions, etc.)
- iii. If the preceding Master Plan already contained provision for the OODC, were the parameters changed at the time of revision of the Master Plan?

### Objectives

- i. Which OODC application objectives are established in the law, and which such objectives are expected by the Administration?
- ii. What urban development results are expected by the Administration with the adoption of the OODC? (legalization / prevention / encouragement of land occupancy)
- iii. If the OODC is being applied as an instrument for balancing/reorganizing the urban structure, describe this policy briefly. (For example, to create comparative advantages for investment in area A in relation to area B; or discourage investment in region C because of excessive density; or attract investment for scheduled transport corridors D and E via significant increase in build ability; explore the potential for a real estate boom in region to increase short-term employment in civil engineering and municipal revenues, etc.)
- iv. What are the operating results expected? (Time frames for implementation, etc.)
- v. What financial results are anticipated?
- vi. What is the expected effect on land prices of application of the OODC?
- vii. What are the estimated effects of the OODC on real estate tax revenues?
- viii. For what purposes are the funds collected to be used (as established by law and the Administration) (e.g., public health)
- ix. Is the OODC the only source of funds for the municipal urban development program?

- x. What is the anticipated scope of allocation of the OODC funds to housing and social-interest infrastructure programs? (Will there be an accounting?)

**Characteristics**

- i. What is the scope of application of the OODC: general? Regional? Individual?
- ii. What are the criteria for establishment of the areas of application of the OODC, and how were they established?
- iii. What percentage of the urban area and of the total area of the municipality was allocated for application of the OODC?
- iv. Were preliminary studies made for determination of the areas of application? What were they?
- v. Were studies made of the impact of the application of the OODC?
- vi. Did the adoption of the OODC involve increase, reduction, or continuation of the previously existing maximum coefficients?
- vii. If the maximum coefficients were increased, what was the expected relationship between the increase in the value of the land and the amount of the charge (the same, over-proportional, under-proportional)? By what percentage?
- viii. Was the basic coefficient adopted unitary, single or variable?
- ix. What criteria were taken into account for the establishment of basic and maximum indices?
- x. Calculation formula: relationship of fiscal value of land/value of building/value of units constructed/value of project?
- xi. What value of the land (or the building) was used as a basis?
- xii. Did the calculation make provision for adjustment factors? (social-interest, planning)
- xiii. Is provision made in the calculation formula for other specific features? (e.g., levels of progression, etc.)
- xiv. What is the nature of the charge payment:: projects/land/money/other?
- xv. Is there a deadline for use of the OODC by the grantee?
- xvi. What time frames are established for collection and payment?
- xvii. The payment was made at what time? or during what period?

- xviii. Are there exemptions? What are they?
- xix. Are there building elements that cannot be calculated?
- xx. Is there combination with other parameters? (e.g. in AEIU areas, etc.)
- xxi. What is the relationship between the OODC and other instruments and mechanisms, particularly the Transfer of Building Potential?
- xxii. Was a transition period established for commencement of application of the OODC?
- xxiii. How were boundary lines with other municipalities treated? Can “border” effects and intra-urban boundary effects occur?
- xxiv. What is the relationship between application of the OODC and special environment, historic, and other protected areas? See question regarding combination.
- xxv. What was the level of acceptance of introduction of the OODC: media/protests/injunctions/challenges? What aspects were challenged? How were the challenges overcome?
- xxvi. Was there community participation in the legislative process of approval of the OODC?
- xxvii. How can the average citizen obtain information about the OODC resources (revenues/application)?

### **Implementation**

Management – How are the revenues monitored and managed

What are the principal difficulties encountered

- i. Political
- ii. Technical/set-up/calculation formula/analysis of effects
- iii. Administrative (personnel and technology for application, management of potential granted and of revenue). What were the reactions of the technicians assigned to apply it?
- iv. Non-compliance
- v. Miscellaneous – describe.

### **Effects**

- i. Who decides to apply the OODC resources, and how is the decision made?



- ii. What are the urban planning results noted: concentration /shift of occupancy to other areas, increased density?
- iii. Were the results obtained evaluated in relation to the results anticipated for potential adjustment of the instrument? Was monitoring done?
- iv. What effect on the price of land/on the real estate market was seen? Reduction in the price of the land? Acceleration/deceleration/freeze or indifference of the market? Data?
- v. What is the percentage of the annual total permit revenues affected by the *outorga onerosa* charges?
  - a) In absolute figures?
  - b) In square meters permitd, in the grant area referred to, and in the city overall?
- vi. What is the total amount of funds invested in social-interest development in recent fiscal years, and what percentage of these funds is accounted for by OODC revenues?
- vii. What are the financial results noted: OODC revenues as proportion of real estate tax revenues, income tax revenues, and total revenues?
- viii. What changes have occurred in real estate tax revenues each fiscal year since the inception of OODC application? (Collect data)

**Final considerations**

- i. Is there any case that is particularly noteworthy?
- ii. How would you summarize the role of the instrument in municipal urban policy?

## **Appendix 5 – Interviews**

### **Alvorada – RS**

Paulo R. G. Padilla – Department of Urban Planning and Housing

Luiz Edson Schontag – Department of Urban Planning and Housing

Renato Wunder - Municipal Department of Revenue

### **Blumenau – SC**

Vera Krummenauer – Municipal Department of Urban Planning

Wagner Figueira – Municipal Department of Urban Planning

### **Campo Grande – MS**

Marta Martinez – Department of Urban Planning (PLANUR)

### **Curitiba – PR**

Zelinda Rosário – Institute of Research and Urban Planning of Curitiba (IPPUC)

Maria Cristina Santana – Institute of Research and Urban Planning of Curitiba (IPPUC)

Maria Cristina Fogaça - Department of Urban Planning and Control of Buildings

### **Florianópolis – SC**

Albertino Ronchi –Municipal Department

Cesar Campos Junior - Civil Office of Civil Engineering

### **Goiania – GO**

Sandra Sarno Rodrigues dos Santos –Municipal Department of Planning (SECPLAN)

Valéria Fleury de Carvalho Penido - Municipal Department of Planning

Ângela Vasconcelos Furtado - Municipal Department of Planning

Iara de Oliveira Reis – Office of the Attorney General of the Municipality

### **Natal – RN**

Maria Florésia Pessoa Silva - Department of Urban and Environment Planning of the Municipal Department of Urban Planning (SEMURB)

José Edílson Bezerra - Municipal Department of Urban Planning

### **Niterói – RJ**

Luis Fernando Valverde Salandía - Municipal Department of Urban Planning

**Porto Alegre – RS**

Claudia Pilla Damásio –Former Under-Secretary, Department of Municipal Planning

Aldo Lapolli –Department of Revenue of the Municipal Government of Porto Alegre

José Luiz Cogo –Department of Municipal Planning

André Luiz Kern –Department of Municipal Planning

**Salvador – BA**

Fernando Teixeira –Department of Municipal Planning (SEPLAM)

Maria Cândida Beltrão - Organization of Land Use and Occupancy, Department of Municipal Planning (SEPLAM)

**Santo André – SP**

Rosana Denaldi - Department of Urban Development and Housing

Claudia Virgínia - Department of Urban Development and Housing

Fernando Bruno - Department of Urban Development and Housing

**São Luís – MA**

Roberto Gouveia –Municipal Department of Planning

José Antônio Viana - Coordination of the Master Plan

Célia - Municipal Department of Land, Housing, Urban Development, and Oversight