

## Evaluation of the Land Value Capture (LVC) experience in the City of São Paulo, Brazil

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**Abstract:** The use of Land Value Capture (LVC) tools has been advocated by many authors as way of financing public investment and projects. The rationale behind these tools is to capture part of capital gains on land derived from public sector interventions on urban development, such as infrastructure implementation or land use regulation change. They can be of great importance in very limited budget environments such as rapid urbanising countries that need to provide a great amount of infrastructure and urban services to accommodate urban growth. The City of São Paulo, Brazil, has implemented LVC since the 1980s through a wide range of different tools. The objective of this paper is to evaluate the implementation of two of these tools, Additional Building Rights Certificate (CEPAC – *Certificado de Potencial Adicional Construtivo*) and Additional Building Rights Levy (OODC – *Outorga Onerosa do Direito de Construir*), from 2002 until 2014. Rather than evaluating these instruments just from a revenue point of view, the work intends to analyse also how effective they are in reducing social disparities, considering the location and kind of investments done. This work was financed and present partial results of a Research Project funded by FAPESP (São Paulo State Research Support Agency), process # 2017/15256-1.

**Keywords:** urban planning, public policy, land value capture, São Paulo.

### 1. Introduction

#### 1.1 Background

The discussion about the use of new urban planning tools based on land value capture (LVC) for urban projects financing in the city of São Paulo dates back from the 1970s. The experience of Spain, Italy, France and the USA had much influence in the study and proposition of a new legal framework separating the right to build from the right of property, based on tools such as Additional Buildings Rights Levy, compulsory urbanization, pre-emption rights and the Transfer of Development Rights (TDR)(São Paulo, 1979).

In these discussions, the concept of “Created Land” was highlighted, corresponding to the “any built area that exceeds a certain proportion of the plot area” (Azevedo Netto, Moreira, et al., 1977, p. 9). This concept arose in 1975 reflections that were being developed by several technicians of the public administration, mainly linked to CEPAM (Centre for Studies and Research of Municipal Administration of the State Department of Home

Affairs)(Moreira, De Ambrosis, et al., 1975). It was widely disseminated in the following years by CEPAM and IAB (Institute of Brazilian Architects), in seminars on the subject, and in the general and specialized press (Memorando, 1977).

Based on this concept, it was proposed to use three new instruments: a single Floor Area Ratio (FAR) for the whole city, the Transfer of Development Rights (TDR) and the proportionality between public and private land. On fixing a single FAR for the whole city, any exceeding built area above this FAR would only be possible by transferring the building rights from another area, either by the acquisition of these right from private owners, or from the Municipality, and in this latter case, either in cash or in the offer of other land of interest to the community.

In the case of the transfer of building rights, this would occur through certain rules set by Local Authorities. Finally, all this discussion was based on the proportionality between public and private land, in other words, the proportionality of population density, which would come from building densification, and the provision of land for public facilities, such as kindergartens, schools, health unities and public spaces, or for redevelopment projects. In the case of the TDR, the idea was also linked to the preservation of buildings of historic interest, as was already done in cities like Chicago and New York in the USA.

The City of São Bernardo do Campo was the first in Brazil to adopt the “Created Land” in its Master Plan, charging for any construction above the single FAR and depositing the money arose from these charges on a “Green Area Fund”, to be used to acquire land for public spaces and parks (Contador, 1977).

The concepts defined on this period would later base the creation of the Additional Building Rights Levy (OODC – *Outorga Onerosa do Direito de Construir* in Portuguese) to obtain resources for urban development. Rezende et al. (2009), in an article analysing the theoretical construction of the OODC, corroborate this idea, showing the evolution of the line of thought of the “Created Land” throughout the 1970s, 1980s and 1990s until the regulation of the OODC by the Federal Law 10.257 / 2001 (Rezende, Furtado, et al., 2009).

Also in the late 1970s, the Municipality of São Paulo itself considered the adoption of “Created Land”, as evidenced by studies developed by COGEP (General Planning Coordination), predecessor of SMDU (São Paulo Urban Development Department) (City of São Paulo, 1979). In addition to the study of foreign experiences, these studies presented analyzes of the economic, physical, legal and institutional aspects of the application of “Created Land” and the use of TDR in historical areas (Espallargas et al., 1979a; and 1979b).

The São Paulo Mayor Olavo Setúbal (1975-1979) even sent a bylaw project regulating the “Created Land” to the Municipal Council, however, the project was withdrawn from the agenda, under pressure from the Brazilian Minister of Finance, Mário Henrique Simonsen, who considered the instrument as inflationary (Memorando, 1977).

Over the years the concept continued to be discussed by the technical staff of the City Hall and in 1991 was incorporated into the proposal for Master Plan revision. This law project proposed the adoption of a single FAR equal to one for all the Urban Zone, with the exception of special zones and cases provided by law.

Densification areas were defined where the FAR 1:1 could be exceeded up to the limit of an available building area stock. The funds collected would be deposited in the Urbanization Fund (FUNDURB) and should be used as a priority in the execution of the ZEIS (Social Interest Special Zones – a sort of inclusionary zoning) programs, in the fulfillment of affordable housing demand, in the public spaces implementation, drainage works and roads of the structural transport system programs.

Despite the new concepts brought by this plan, it suffered great resistance from the real estate sector. The point was not to be against the single FAR, but to be against the value equal to one. For the industry, the FAR should be at least 2:1. Finally, at the time of presentation to the City Hall, entrepreneurs made strong resistance to keep the “rules of the game” unchanged, that is, the existing zoning (Antonucci, 2002). At that time, many criticisms were made by several people related to the real estate market, including architects that said that the adoption of OODC would render construction unviable in the city of São Paulo.

## **1.2 The Interconnected Operations (IO)**

However, the concept of created land was only used in the city of São Paulo through the Interconnected Operation urban planning tool (Montandon, 2009). Established under bylaw 10,209/1986, this instrument allowed owners of land occupied by favelas or precarious housing to request the City Hall a major FAR than the allowed, provided they were obliged to build or to donate social housing to the favela population. The name interconnected operation came from the necessity of a married operation between the modification of the FAR, removal of the favelas and relocation of the population in the built housing units.

Subsequently, this instrument was amended by bylaw 11.773/1995, which allowed for the revision of the FAR and other land use regulation of any land in the city, with a financial counterpart linked to the Municipal Housing Fund (FMH). By this law, the revised FAR could reach 4:1 and the building could occupy 80% of the plot area (OR – Occupation Rate of 0.8).

In 1998, the State Public Attorney charged an ADIN (Action of Unconstitutionality) against the use of the IO by São Paulo Municipality in the State Court as it gave to the Executive prerogatives of zoning change inherent to the Legislative. The Court accepted the action and the use of the tool was considered unconstitutional in 2000.

## **2. Recent implementation of Land Value Capture Tools**

### **2.1 The Consortium Urban Operations**

Another urban planning tool that used the concept of the created land was the Urban Operation. The idea of this instrument emerged from a series of studies carried out by SEMPLA (City Planning Department), between 1983 and 1985. The dossier resulting from these studies defined urban operations as “integrated sets of urban interventions developed in determined areas of the city under the coordination of the municipality, aiming to obtain results relevant to the objectives of the Master Plan”, with the objectives of making feasible the production of social housing, urban infrastructure, public facilities with the participation of private entrepreneurs (City of São Paulo, 1985 *apud* Montandon, 2009 , p.15).

The above concept of Urban Operation was inserted in the proposal of the 1985/2000 Master Plan, but in the real plan, established by the bylaw 10.676/1988, its concept was simplified and its importance reduced, since the Interconnected Operation was already working.

The instrument was only implemented in 1995 with the creation of the Faria Lima Urban Operation in the bylaw 11.732/1995. According to its registration prospectus at the Securities and Exchange Commission: “The Faria Lima Urban Operation was the first to produce effective financial results, that is, to generate a self-financing

environment for the execution of the public interventions provided by the additional building rights levy, thereby without compromising the municipality budget". (City of São Paulo, 2008, page 47)

In 2001, the City Statute, Federal Law 10.257/2001, ruled the Urban Policy Chapter of the 1988 Federal Constitution, included this urban planning tool, redefining it as a Consortium Urban Operation (OUC), which is "a set of interventions coordinated by local authorities, with the participation of the private entrepreneurs, which aims to achieve structural urban transformations, social improvements and environmental remediation of a given area" (Brazil, 2001, article 32, paragraph 1). In 2002, the PDEMSP - São Paulo Municipality Strategic Master Plan established nine urban operations (City of São Paulo, 2002, article 225, § 2o).

The changes introduced in the City Statute and the 2002 Master Plan allowed a new form of financial funding beyond the OODC. The CEPAC (Additional Building Rights Certificate) is a bond issued by the Municipality of São Paulo, marketed on the stock exchange, corresponding to an additional building area for any plot within the perimeter of a Consortium Urban Operation. Each CEPAC is equivalent to a certain amount of square meters for use in an additional building area or in modification of uses and parameters of a land or project.

There are currently four regulated urban operations in the city of São Paulo: OUCAB - Água Branca Consortium Urban Operation (created in 1995 and revised in 2013); OUCAE - Água Espraiada Consortium Urban Operation (created in 2001); OUC - Centro Urban Operation (created in 1997); OUCFL - Faria Lima Consortium Urban Operation (created in 1995 and revised in 2004).

Currently, there is already a great theoretical reflection on the use of this instrument in São Paulo. The criticisms range from the exclusionary effects due to the "expelling" of lower income population, increasing socio-spatial segregation (Fix, 2001; Maricato; Ferreira, 2002); through the privilege of real estate issues of private interest to the detriment of the public interest (Castro, 2006); the lack of an urban design and an emphasis on the great road works (Vilariño, 2006; Nobre, 2009); and lack of efficiency in the recovery of land value capture in comparison with the public investments made (Montanton, 2007).

Urban operations proved to be an instrument with a high financial attractiveness, since in nineteen years of implementation they managed to raise R\$ 6.3 billion (around € 1.4 billion), corresponding to an additional building area of 5.97 million square meters, averaging R\$ 1,050 per additional square meter (€ 233), and in the OUCFL (Faria Lima Consortium Urban Operation) was the one that most appreciated, with the initial market value of CEPAC varying from R\$ 1,100 in December 2004 to R\$ 4,000 in May 2010 (SP Urbanismo, 2014a).

However, with regard to investments, there is a predominance of road works of the amount spent on all urban operations in the city of São Paulo. According to municipal data, 43% of the money spent on public works on urban operation was on road works. The second largest expense was in land expropriation for the works, corresponding to 19% of the amount. Public transportation and social housing expenses together accounted for only 31% of the total (14% for the former and 17% for the latter), partly explaining the criticism received from the way in which the instrument has been used.

Another issue that seems pertinent is that the OUC (Consortium Urban Operation) collects more, and consequently concentrates more investments, where there is already a great interest of the real estate market. In this regard, the two operations in the Southwest Region of the city accounted for 89% of the total amount collected by all four operations. This represents a very large spatial concentration of investments, since the areas of these two operations together amount to only 2% of the area of the city and by definition of the City Statute the resources collected inside an OUC can only be applied within its perimeter. This increased the socio-spatial differentiation on an already very segregated city.

In the review of this instrument in the current Master Plan, part of these problems may be remedied, since according to paragraph 1 of Article 142 “at least 25% (twenty-five percent) of the funds collected shall be invested in social housing within the perimeter of the Urban Consortium Operation, preferably in the acquisition of land for the housing units” (City of São Paulo, 2014). However, the implementation of collective transportation systems was not considered in this review.

Another issue that may improve the implementation of urban operations reviewed by the Master Plan is that they have now a greater social control, since their management council has to be parity between the Public Power and civil society.

## **2.2 The Additional Building Rights Levy (OODC)**

Despite its use in interconnected operations and in the urban operations, the Additional Buildings Rights Levy (OODC – Outorga Onerosa do Direito de Construir) only came to be ruled for the whole city in the 2002 MASTER PLAN, after its definition in the Statute of the City, which consolidated the use of the concept of created land at the National level.

Pursuant to this Law, “city Master Plans may establish areas in which the building rights may exceed the Basic FAR up to the Maximum FAR, defined by the plan, upon the payment of the levy, taking into account the proportionality between the existing infrastructure and the expected density increase in each area” (BRASIL, 2001). It may also establish areas in which alteration of land use may be allowed. A bylaw shall establish the conditions to be observed for the ODDC and change of land use, determining: i) The formula for the levy; ii) The cases that may be exempted from payment; iii) The counterpart of the beneficiary.

The 2002 Master Plans first ruled the OODC for the whole city and defined the Areas of Possible Additional Building Rights Grant, whereas the building rights to could exceed the basic FAR (Cab) up to maximum FAR (Cam). The additional building stock was defined for the 96 Municipal Districts of the city. All the resources acquired by this levy should be deposited in the FUNDURB (Urban Development Fund).

One of the major difficulties to implement the OODC at this time was the possibility to use a formula whereas additional building rights were given for free as well as the plot coverage was diminished, tool based on the New York Incentive Zoning of that city 1969 Master Plan. Certainly this device was placed in São Paulo 2002 Master Plan as a transition for the real estate market to become accustomed to the new rules.

The OODC concept was revised in the 2014 Master Plan. The additional constructive potential was considered as a legal right, owned by the City Hall, with urban and socioenvironmental functions, corresponding to the difference between the constructive potential used and the basic constructive potential.

The basic FAR was defined 1:1 to the whole city in accordance with the created land idea of the 1970s. After 12 years of OODC implementation, the real estate market has already become familiarized to the instrument. The maximum FAR 4:1 was defined for the Structuring of Urban Transformation Axes Zones (ZEU), in the some economic development incentive zones (ZOE), and in the social interest special zone (ZEIS). The consortium urban operations will define their coefficients, respecting the basic FAR of 1:1. In the rest of the city, the maximum FAR is 2:1, except for areas where it was already smaller than this.

Interestingly, if on the one hand the amount of additional area is very close to the additional area built in all urban operations, on the other hand, the amount collected corresponds approximately to 1/4, while the average

value per square meter corresponds to 1/3, demonstrating the power of land value capture of the OUC. This was due in part to the outdated Municipality Land Value Map, and in part by CEPAC being a financial asset not tied to a specific venture, being bought by banks and investors, who then resell it for a larger amount of money, valuing the bond.

With a new calculation formula and update of the Municipal Land Value Map, it was expected a considerable increase in the collection of OODC. According to studies by SP Urbanismo (2014b), considering an average of residential and commercial gross area increase of 3.7 million square meters per year, the expectation of net collection with OODC's counterparts was R\$ 480 million a year (€ 106 million), representing an increase of three times the of average collected so far (2011).

Regarding the expectation of additional built vertical area, the values seem to be consistent with what has been happening in the city of São Paulo. According to data from the TPCL (Land and Building Taxes Register), between 2002 and 2012, there was an increase of residential and commercial built areas of 41.5 million square meters or 4.15 million square meters per year, (SMDU, 2014).

However, the economic crises Brazilian economy underwent following the 2008 USA Subprime Crises impacted São Paulo real estate market, reducing the amount of collect money to the half of it as the construction sector is very susceptible to economic changes, being the first to decrease production in times of crisis, returning rapidly in times of economic growth.

### **3. Final considerations**

The implementation of LVC tools in São Paulo presents controversial results in the experience of interconnected operations, consortium urban operations and the additional building rights levy.

In spite of the fact that, historically, the use of collected resources for social purposes (social housing, community facilities and public transportation) has increased, the analysis of its implementation has shown a tendency towards aggravating socio-spatial disparities in a city already segregated in the two first cases (interconnected operations and consortium urban operations).

In the case of interconnected operations, the construction of social housing in the outskirts of the city as a counterpart to changes in urban legislation represented the removal of the population from the favelas and precarious housing from a privileged location in the city center to the outskirt regions, lacking in services and urban infrastructure. In any case, the use of the instrument was declared unconstitutional.

In the case of consortium urban operations, the predominance of the use of the resources collected in large road works, some of which are exclusively dedicated to the automobile, demonstrates an option that goes against the objectives of the universality of public policies and social justice of the Master Plan, since only a third of the daily metropolitan journeys are carried out by this modal and precisely by the population of higher income (METRÔ, 2007).

In addition, the two most successful urban operations in the resources collection are located in the most highly valued regions and most endowed with urban infrastructure in the city, which is why they are of interest to the real estate market. Due to restrictions imposed by the City Statute, resources collected in the intercropping operations can only be invested within the perimeter of the operation.

In this way, instead of a “virtuous cycle”, a “vicious cycle” of investment-valorization-reinvestment-valorization is created, increasing socio-spatial disparities. The fact that these two urban operations represent only 2% of the area of the municipality and have almost four times more resources to invest than FUNDURB is another factor that demonstrates the distortion of the use of this instrument.

The 2014 Master Plan seeks to reverse these negative aspects defining that at least 25% of the funds raised should be earmarked for the acquisition of land for social housing within its perimeter, but did not define anything about the implementation of public transport systems.

Regarding to social justice and public policies implementation, the additional building rights levy is the only instrument that can contribute to these. The recent regulation obliging the municipality to invest 30% of the resources for the acquisition of land for the social housing production and 30% for the implementation of public transport systems, bicycle and pedestrian ways, ensures that 60% resources are invested in objectives that are in line with the social objectives of the Plan.

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