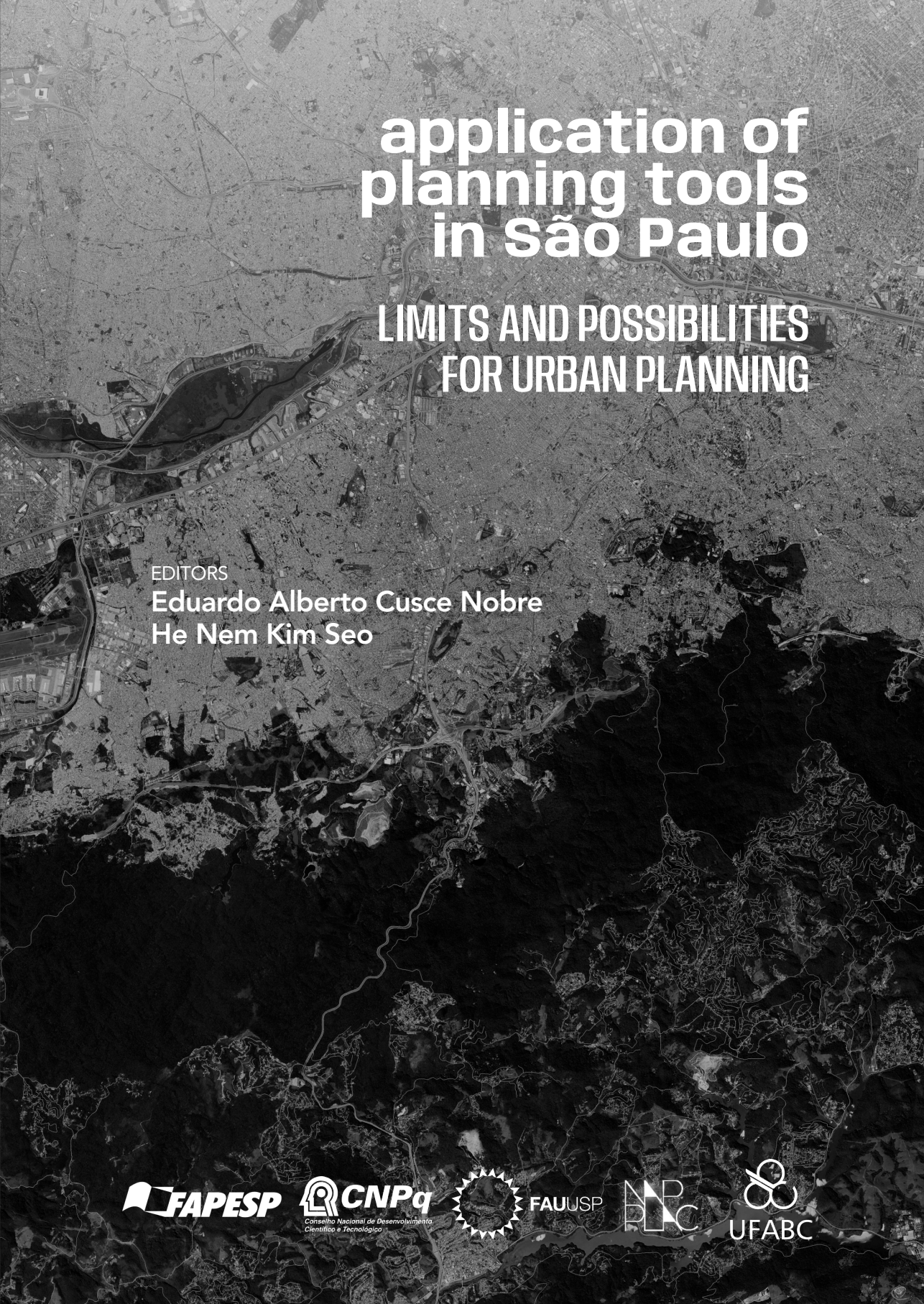

application of planning tools in São Paulo

LIMITS AND POSSIBILITIES FOR URBAN PLANNING

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APPLICATION OF PLANNING TOOLS IN SÃO PAULO
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Foreword

The experience of preparing and implementing the 2002 and 2014 Strategic Master Plans (PDEs) in São Paulo is perhaps the most complete example of the inclusion of urbanistic instruments that have penetrated the lexis and strategies of a theoretical and practical renewal movement of the late 1980s in the planning of Brazilian cities. The *Movimento pela Reforma Urbana* (Movement for Urban Reform), among other political actions, has invested mobilization and formulation energy in urban regulation.

The social function of the city and urban property; socio-territorial inclusion; participation and democratic management; social management of real estate valorization. These are some of the expressions that became part of the vocabulary of the master plan guidelines. Additional building rights levy, special zones of social interest; transfer of construction potential; compulsory building and parceling, among others, are the urban instruments present in master plans.

This book aims to evaluate if the application of urban planning instruments proposed in the 2002 and 2014 PDEs in the municipality of São Paulo was able to achieve the objectives they were designed for, the fulfillment of the guidelines to which they were related. Moreover, it does so through research that mobilizes indicators and closely and critically monitors their implementation.

Since the book's introduction, its authors warn us:

> Logically, the urbanistic instruments represent an initiative of the State in regulating the production of space. Nevertheless, they do not solve the problem of the organization of spatial production by themselves, much less the conflicts inherent to the process, since they are shaped by the political and social conditions that structure society itself.

Here we want to reflect on the limits and possibilities of applying these instruments, illuminating the political and epistemological process responsible for formatting the paradigms that shaped them. It is necessary to quickly go through the more than three decades of this trajectory, since the end of the 1980s and the constituent process, which marks the encounter between a social movement and the field of urban legislation.

The "Urban Reform ideology" is usually linked to the formulations of a movement of rupture and tension with the prevailing urbanistic order that emerged from the struggles of the peripheries and favelas for their right to have rights. According to the participants and protagonists of this process, the guidelines and instruments consolidated in the 2001 City Statute were designed within a utopian implementation of inclusive municipal policies in a city marked by territorial exclusion of the majorities. In the 1980s, the military dictatorship entered into crisis amidst a huge economic debacle after the years of the so-called "economic miracle." At that moment, a social movement emerged to overthrow the military dictatorship and the model that had guided policies for the previous twenty years, hoping for utopian construction of a new possibility of managing the country, cities, and territories through radically democratic processes. It was a bet on democracy with

direct participation exercised through practices such as participatory budgets and councils that would be able to promote development with inclusion. Remember that, in such large contexts of inequality, the idea of inclusion presupposes and is inseparable from the idea of redistribution of urban income and public fund resources. This was the basis of the participatory budget, the inversion of priorities, the investments in the peripheries, and is at the origin of some of the guidelines that entered and renewed urban planning.

However, this was not the only force shaping the renewal of urban planning in the country. Nor was it built in a vacuum, but rather on an earlier urban planning tradition. Thus, it is necessary to tell other sides of the same story.

If, on the one hand, the strength of a social movement pressured to insert an urban agenda in the 1988 Constituent Assembly. On the other, the technocratic tradition of planning prevailed in the Constituent Congress, which articulated planning as a rational ordering and modernizing of space with the political economy of cities, centered on the logic of real estate production and the production of large infrastructures. This means that the planning technique, the language of planning, and its repertoire, are very much structured on the products of the real estate industry. On the one hand, by the real estate complex, on the other hand, by the interests and structure of the companies involved in the infrastructure production: the contractors.

The parameters of the planning language, as well as the logic of conformation of urbanization, are 100% adherent to the real estate products produced by the real estate industry (the tower, the land division, the condominium, the industrial shed, etc.) and the products of the large

structures construction industry (the viaducts and tunnels, the flood control reservoirs, etc.). Floor Area Ratios, for example, so central to all urban regulation, have to do fundamentally with construction potential, that is, the ability to extract income from a plot of land. It has very little to do with the logic of the organization of living spaces or issues such as landscape, history, nature.

Therefore, the definition of the Master Plan as the locus of city dispute defined its terms, its epistemology, and the hegemony of real estate since the first master plan experiences. It condemned the social movement to play in this arena with its rules, languages, and ways of reading the city, establishing in the 1990s and throughout the following decades a kind of pact or coalition that sought, from this logic and within it, to introduce elements of redistribution, inclusion, and social control.

Finally, we cannot fail to point out that the definition and design of urban planning instruments, since the 1990s and particularly in the formulation of the City Statute, have been greatly influenced by the emergence of a new paradigm of urban planning. It was formulated and adhered to neoliberal theories and practices that have gained strength in the fiscal adjustment context and the growing participation of private actors in urban restructuring processes. Real estate and the production of space have been gaining an increasingly central role in financialization. As urban space enters as a warranty, a collateral element in financial circuits, and through new financial instruments capable of securitizing space, i.e., enabling its instantaneous circulation in increasingly globalized financial circuits.

Since the usage of Strategic Planning, the opening for a flexible normative space, urbanistic regulation has been fundamental to establishing perimeters so these partnerships could capture city territories for their future earnings expectations.

This paradigm and its instruments, such as urban operations, have also been the object of permanent tension, especially around capturing and distributing burdens and benefits and the dependability of social counterparts. It is also fundamental to point out that, depending on their greater or lesser commitments to income redistribution and inclusion and their capacity to negotiate with the different interests involved in the dispute over the city, the actions of municipal governments in managing the Plan and its instruments made a difference in the results.

Reading this book will show some concrete results of these disputes. Undoubtedly, this work - and others aimed at evaluating this trajectory - are fundamental to help us think about the future and - who knows? - a new movement generation for the right to the city, nurturing a new urbanistic imagination capable of building and implementing new paradigms.

Professor of Urban and Regional Planning at the Faculty of Architecture and Urbanism at the University of São Paulo

preface

In Chapter II – Urban Policy, the Federal Constitution of 1988 (Portuguese: *Constituição da República Federativa do Brasil*) lined the role of municipal governments in ensuring the social function of urban property and the city as compulsory guidelines for Brazilian urban development. The chapter also stated Master Plans as the primary tool for urban development and policy at a national level. In 2001, the enactment of the City Statute (Portuguese: *Estatuto da Cidade*), built on the Federal Constitution, provided a new legal-urban framework for planning tools to achieve the social function of the city and urban land. Since then, several studies have assessed how master plans and their respective planning tools have taken shape and delivered results on a national and municipal scale.

Since then, several Brazilian municipalities have prepared their master plans in line with the guidelines of federal law. In this sense, the municipality of São Paulo enacted its Strategic Master Plan (PDE) in 2002, consolidating urban planning instruments that were already being applied in the city and recommending others that were already being considered and proposed in different municipalities. In 2014, after a review process, São Paulo enacted a new PDE, redefining old instruments and proposing new ones.

For twenty years since the enactment of the City Statute, several studies have been carried out to evaluate the application of master plans and their

instruments on a national and local scale. This book evaluates if the 2002 and 2014 Strategic Master Plans of São Paulo addressed and assured the social function of urban property and the city. This work results from a research project funded by the São Paulo Research Foundation (FAPESP, Portuguese: *Fundação de Amparo à Pesquisa do Estado de São Paulo*) and the National Council for Scientific and Technological Development (CNPq, Portuguese: *Conselho Nacional de Desenvolvimento Científico e Tecnológico*).

Therefore, the following content presents researchers' studies on planning tools and São Paulo's real estate dynamics. They examine how some instruments have effectively or not prevented real estate development from taking only financial advantage out of the city. In other words, could these planning tools help socialize land gains? In addition, we benchmarked tools used in São Paulo and other cities, mainly abroad.

One of our conclusions is that planning tools alone do not set cities free from private interests and much less solve their intrinsic social struggles. So, as the 2014 Strategic Master Plan is supposed to be revised in 2024, this book brings evidence that could eventually support politicians and scholars to understand the limitations and the possibilities for achieving the social function of the city and the land.

introduction

ASSESSING THE USE OF PLANNING TOOLS IN SÃO PAULO

Eduardo Alberto Cusce Nobre

He Nem Kim Seo

Marina Pinheiro Marques

Article 82 of the 1988 Federal Constitution stated that Municipal Governments must elaborate Master Plans as their primary tool to achieve their own urban development policy (BRASIL, 1988). Besides, the discussion about Urban Reform (which became popular during the 1960s) was quite relevant to influence legislators to incorporate the social function of the city and the urban property into the Constitution's guidelines. At that time, Brazil underwent a fast-growing urban sprawl and accelerated economic growth in the context of peripheral capitalism, being affected by all the ensuing urban ills.

Due to the conflicts and disputes of interest regarding land property (MARICATO, 2008; MARTINS, 1979), it took thirteen years for legislators to put the City Statute into effect. The Statute was enacted by Federal Law 10,257 on July 10th, 2001 (BRASIL, 2001) despite many urban planning tools had been previously used by Municipal Governments. Therefore, the City Statute provided the necessary urban-legal framework for the proper use of the instruments nationwide.

Twenty years after 2001, several studies were carried out to put light on the effectiveness of such tools and assess whether the results met their initial goals or not. In an assessment developed for the Ministry of Cities (Portuguese: *Ministério das Cidades*) on the implementation of master plans, Santos Junior and Montandon (2011) highlighted the difficulties to regulate planning tools, as can be seen below:

> The findings evidenced a generalized inadequacy of the tools regulation in the Master Plans concerning their self-application or effectiveness, especially in urban development-oriented tools. In other words, they are not good enough to define urban concepts and parameters, demarcate which tools must be used in each territory, and establish deadlines for administrative procedures, among other aspects (SANTOS JUNIOR; MONTANDON, 2011, p. 34).

Santos Junior and Montandon's work (2011) also draws attention to the need for articulating planning tools with Master Plan's goals:

> The National Council of Cities Resolution 34, instituted on July 1st, 2005, [..], defined guidelines aligned with the current Master Plan content. As a result, there is a clear orientation for the Plans to incorporate the City Statute's tools, "connecting them to the goals and strategies established in the Master Plan" (item IV, art. 1). The reason lies in the relationship between the planning tools with the fulfillment of the social function of property and, consequently, of the urban development strategies entitled to the Master Plan (SANTOS JUNIOR; MONTANDON, 2011, p. 34).

São Paulo was one of the leading cities in Brazil to use planning tools for controlling urban development from the 1980s onwards, even before the enactment of the City Statue. Some of them are namely Interconnected Operations (Portuguese: *Operações Interligadas*), Urban Operations (Portuguese: *Operações Urbanas*), and Transfer of Development Rights (TDR, Portuguese: *Transferência do Direito de Construir*[1]). Although city administration did implement other alternative tools, some of them had already been included in several drafts for the city's master plan. For example, the Special Zones of Social Interest (Portuguese: *Zonas Especiais de*

1. N.T. This term is literally translated into English as "Transfer of the Right to Build".

Interesse Social) and the Urban Development Fund (Portuguese: *Fundo de Desenvolvimento Urbano*). Moreover, many of them were built on discussions and ideas addressed nationally that also traveled worldwide during the period.

The Strategic Master Plan of 2002 regulated all those planning tools in a more articulated manner and legally passed into Municipal Law 13,430/2002 (SÃO PAULO, 2002), amended by the new São Paulo's Strategic Master Plan on Municipal Law 16,050/2014 (SÃO PAULO, 2014).

The city's brand-new regulatory framework of 2014 resulted from a participatory process that sought to review the tools ruled in 2002 to enhance their capability, as well as proposing new tools to achieve the Master Plan's main objectives, namely: promoting the social function of the city and urban property; equity and socio-territorial inclusion; democratic management; and the right to the city.

The city administration at the time (mayor Fernando Haddad, 2013-2016) endeavored to improve the legal and administrative framework proposed by the São Paulo's Master Plan of 2014. The tools to promote the social function of the property were revised along with the creation of a specific department for its implementation (the Department of Control of the Social Function Property of the Municipal Secretariat for Urban Development).

Urban mobility in São Paulo gained ground through the Structuring Axes of Urban Transformation tool (EETU, Portuguese: *Eixos de Estruturação da Transformação Urbana*) - which resulted in the formulation of the Structuring Axes of Urban

Transformation zone (ZEU, Portuguese: *Zonas de Estruturação da Transformação Urbana*) by the zoning law n. 16.402/2016, promoting urban growth throughout the public transport axes, following the Transit-Oriented Development (TOD) standards.

The 2014 São Paulo Master Plan modified the tool known as Additional Building Rights Levy (Portuguese: *Outorga Onerosa do Direito de Construir*) to capture land value and improve development control. The Master Plan of 2014 also reallocated resources of the Urban Development Fund (FUNDURB, Portuguese: *Fundo de Desenvolvimento Urbano*) to provide public transit, cycling systems, pedestrian thoroughfares (at least 30% of the funds), and to acquire land for social housing (at least 30% of the funds). Likewise, part of the resources obtained by Consortium Urban Operations (25%) also began to be designated for land acquisition for social housing.

Master Plan of 2014 also increased 20% the number of Special Zones of Social Interest (ZEIS) areas and reviewed their regulations to assist lower-income families mainly. In addition, a Solidarity Share allocated 10% of the computable large new projects' lot area to Social Interest Housing. Furthermore, it also included the category of Cultural Built Heritage Protection Areas (APC, Portuguese: *Área de Proteção Cultural*) into the Special Cultural Preservation Zones (ZEPEC, Portuguese: *Zona Especial de Preservação Cultural*). Besides, the Transfer of Development Rights underwent a reviewing process aimed at enhancing its performance.

In addition, the 2014 Master Plan addressed several other urban planning and restructuring instruments, such as Urban Intervention Projects (PIU, Portuguese: *Projetos*

de Intervenção Urbana), Consortium Urban Operations (UOC), Urban Intervention Areas (AIU, Portuguese: *Áreas de Intervenção Urbana*), Local Structuring Areas (AEL, Portuguese: *Áreas de Estruturação Local*), etc.

As a result of innovation-based goals, the Master Plan of 2014 was awarded as the "best urban commitment" by the renowned international architecture website ArchDaily and as "the best innovative practice" from the UN-Habitat New Urban Agenda. In addition, New York City Department of Transportation's former commissioner Janette Sadik-Khan praised the Master Plan's principles on social inclusion and environmental sustainability, as quoted below:

> Janette Sadik-Khan, the former commissioner of the New York City Department of Transportation, believes that the current administration [Fernando Haddad, 2013/2016] lays the groundwork for a more sustainable São Paulo. If the largest city in Latin America still cannot be considered one of the most globally developed, we can conclude that São Paulo has made great strides toward that goal (ARCHDAILY, 2015).

The plan's innovation strategies sought to overcome a historical ideology of urban planning in São Paulo guided by car-oriented ideologies and favoring regulation on the economic elite area of interests (NOBRE, 2019).

The changes followed up with the government administration viewpoint at the time. It invested in projects that made room for active transportation and rapid transit (such as bus lanes and cycling paths, speed limit policy); a recovery of the social function of the public space (with successful projects such as *Centro Aberto* [Open Downtown], Parklets, *Paulista Aberta* [Carfree Avenida Paulista]); and the development

of an alternative economic. For example, the Chain of Agriculture Project (Portuguese: *Projeto Cadeia de Agricultura*), also known as "Connect the Points," simultaneously restrained urban sprawl and generated income through encouraging urban agriculture. The project won international awards by the Bloomberg Philanthropies' 2016 Mayors Challenge.

However, recent political changes in municipal urban policy put the plan's goals and its long-term view at risk. The following administration (mayors João Dória/Bruno Covas, 2017-2020) politically diverged from the 2014 Master Plan guidelines.

Despite representing a state initiative in regulating the city production, the effectiveness of urban tools must need integration with other policies and social practices. Tools do not solve issues regarding city production, much less solve its intrinsic struggles, given that they are shaped by the political and social conditions that structure society itself. Agreeing with Deák (1999), urban planning tools will only become more effective as society's transformations demand them. Therefore, success depends on how social forces can organize themselves to engender makeovers. Then, it is crucial to propose directions towards overcoming several obstacles and realizing its unrealized potential.

Thus, this book investigates the use of planning tools proposed under the 2002 Strategic Master Plan. Besides, it prospects the possibilities of making effective use of the mechanisms offered by the 2014 Strategic Master Plan to assess to what extent they can achieve goals such as: the fulfillment of the social function of the city and the urban property; equity and socio-territorial inclusion; democratic management; and the right to the city.

This book results from a project funded by two research agencies (FAPESP and CNPq) and is divided into seven chapters[2].

The first chapter, written by Eduardo Nobre, He Nem Kim Seo, and Marina Pinheiro, presents a first analysis of the urban metropolitan context of São Paulo. The chapter's goal is to understand the urban real estate dynamics and their impacts on the city to provide subsidies for evaluating the effectiveness of urban tools. The following chapters will deep into each urban tool for a more detailed investigation. Furthermore, this chapter provides a theoretical analysis of the recent transformations in the São Paulo real estate market based on an extensive bibliographical review. Besides, the authors examine the spatialization of real estate production, relating it to the current zoning through the geospatial data collected during the periods in which different legal frameworks were in course. Finally, the authors assessed the impact of real estate production on the urban structure, pointing out conceivable transformations between 1997 and 2017 by analyzing the mapping of socioeconomic data, such as family's income and demographic, household, and job densities.

The following sections thematize the chapters according to their main objectives in common and accordingly with the definition given by the work coordinated by the Chamber of Deputies (BRASIL, 2002):

Part 1: proposes analyzing urban tools for supporting urban policy and development, socializing land gains, and mediating private participation;

Part 2: presents an examination of urban and legal tools for expanding access to urbanized land and ensuring the right to the city.

2. Research Project "Limits and Possibilities for Fulfilling Urban Tools in the Municipality of São Paulo: evaluation and prospection," supported by FAPESP's Regular Research Project (Process n. 2017/15,256-1) and the CNPq Universal Notice (Process n. 423,981/2018-8).

The second chapter, written by Eduardo Nobre, analyzes the implementation of Consortium Urban Operations in São Paulo, considering how they benefited some social strata to the detriment of others. In addition, Nobre displays how much each operation fundraised and how funds were spent by type of work.

The third chapter, written by Kaio Nogueira, assesses the conceptual field of the Additional Building Rights Levy, its metrics and reviewing, to show to what extent it might be concretely effective to socialize land gains. In addition, the author points out promising limits and barriers for this tool to meet the master plan's goals.

The fourth chapter, written by Eduardo Nobre and Marília Valerio, assesses the implementation of the Urban Development Fund (FUNDURB) in São Paulo by judging how funds raised were settled by urban dimensions.

The fifth chapter, written by Dulcilei Cipriano, analyzes the concession of Development Rights, a tool that became popular between 1998 and 2018. The author sought to find out if this tool safeguarded the cultural built heritage in São Paulo.

The second part of the book, at the sixth chapter, Simone Gatti investigates the implementation of the Special Zone of Social Interest (ZEIS - type 3) in São Paulo, mainly concerning promoting new social housing units.

The seventh chapter, written by Patrícia Cezário Silva and Igor Borges, presents findings concerning the impact of the Solidarity Share from 2014 to 2019. In addition, the authors sought to identify the implications of the alternatives included in the legal text concerning housing production in urbanization and collection priority hubs.

Finally, the afterword presents our general findings. It highlights essential recommendations for regulating tools to integrate them better with other techniques offered by São Paulo's regulatory framework for urban planning.

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1 São Paulo's territorial context:

THE RELATIONSHIP BETWEEN THE CITY'S REAL ESTATE DYNAMICS AND URBAN PLANNING TOOLS

Eduardo Alberto Cusce Nobre
He Nem Kim Seo
Marina Pinheiro Marques

Abstract

Historically, urban planning in Western countries relies on two main instruments: master plans and zoning legislation implemented by land-use tools. Both are directly and intrinsically related to the cities' real estate dynamics, regulating future urban growth. Thus, discerning the city's real estate dynamics is highly crucial to understanding these instruments' application. First, this chapter analyzes the real estate dynamics in the São Paulo Metropolitan Area vis-a-vis its current urban legislation. Next, the authors investigate the history of the urbanization process to analyze the recent restructuring of the real estate market and finally study the impacts on São Paulo's urban form.

Keywords

urbanization process, real estate market, urban legislation, urban form, São Paulo.

HISTORY OF THE URBANIZATION PROCESS

In 2010, the Municipality of São Paulo had about 11 million inhabitants, corresponding to 6% of the national population and just over half of its metropolitan region. Thus, São Paulo is the largest urban agglomeration in Brazil[1] (Figure 1.1).

From an economic point of view, the concentration is even more remarkable. The municipality and the metropolitan area held, respectively, 12% and 19% of the national Gross Domestic Product (GDP), and clustered only 2% and 9% of the national territory[2]. Despite that, the city wrestles with high rates of unequal income distribution: 43% of households earned three minimum wages (MW) in 2010 (US$ 926), and only 6% of them achieved more than 20 MW (US$ 6,178) (ibid.).

The unequal concentration of population and income reflects Brazil's external financial, technical, and ideological dependence that tangled up the national development. Furthermore, the expatriation of a significant part of the accumulated capital and the exclusion of dominated classes from the national development process are typical symptoms of a peripheral country to the capitalist world economy (NOBRE, 2019).

São Paulo consolidated its metropolitan area during the 20th century, when its urban core and neighboring surroundings underwent intense fast-growing urbanization, resulting from several production cycles of economic activities (ibid.). In addition, the coffee-based agro-economy exports led São Paulo to accumulate capital, which was subsequently invested in the promising national industry. Thus, the blossoming industry drove the urbanization process at a national level from the mid-19th century until the 1930s.

1. In 2010, São Paulo city, São Paulo metropolitan area, and Brazil held 11,253,503; 19,683,975 and 190,755,799 inhabitants, according to data from the Brazilian Demographic Census (IBGE, 2011).

2. In 2010, São Paulo city's, São Paulo Metropolitan Area's, and Brazil's GDPs were US$ 272 billion, 444 billion, and 2.4 trillion (IBGE, 2011), converted at a rate of US$0.61 for each R$1.00, according to the Banco do Brasil Currency Converter website (https://www.bcb.gov.br/conversao) .

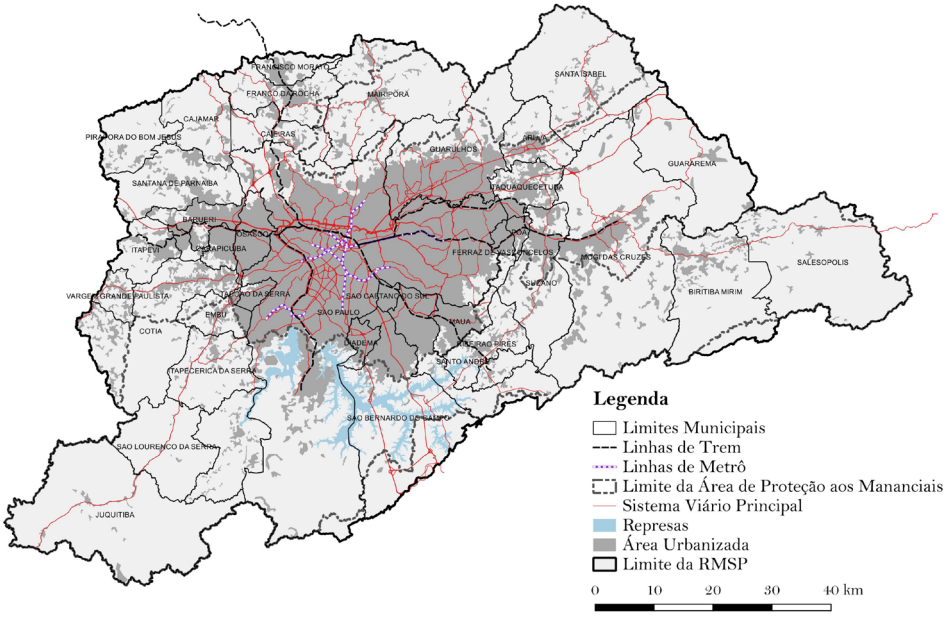


Figure 1.1
São Paulo's Metropolitan Area
Source: Prepared by Eduardo Nobre based on CESAD (2002), EMPLASA (2010) and Geosampa (2016).

From the 1930s to the 1950s, São Paulo became the most important industrial hub in the country. The establishment of the automobile sector enhanced the national heavy industry and concentrated jobs and production in São Paulo until the 1970s. This was followed by a productive deconcentration towards the state's interior and other Brazilian regions, which helped improve the tertiary sector's weight in the country's economic base.

As a result, São Paulo experienced a significant population increase, resulting in urban sprawling from the 1950s onwards. However, from the 1960s on, population growth began to decrease due to the de-concentration of productive activities, which were directed to other regions of the state of São Paulo and the country, leading to a fall in migratory growth. On the other hand, patterns of fertility rates reversed, dropping from 5.8 to 2.4 of children per woman between 1970 and 2000, reducing vegetative growth in the meanwhile as well. (NOBRE, 2000).

Considering that Dependent Development generates artificial scarcity of capital, the Public Power continued to concentrate investments in infrastructure and essential services in areas where productive activities were already active. Consequently, this proccess built a highly segregated urban space: the middle and high-income strata occupying the central areas better provided with jobs, accessibility, infrastructure, and services, while the lower-income sectors were displaced to less privileged areas on the metropolitan fringes, as shown in Figure 1.2 (MARICATO, 1996; VILLAÇA, 1998).

The inefficiency of the urban planning process and the lack of efficient housing policies capable of assisting the lower-income strata stressed the gap between housing demand and supply. The formal real state market could not fulfill those demands, and this segment had to look for alternatives outside the of it, in slum tenements, favelas

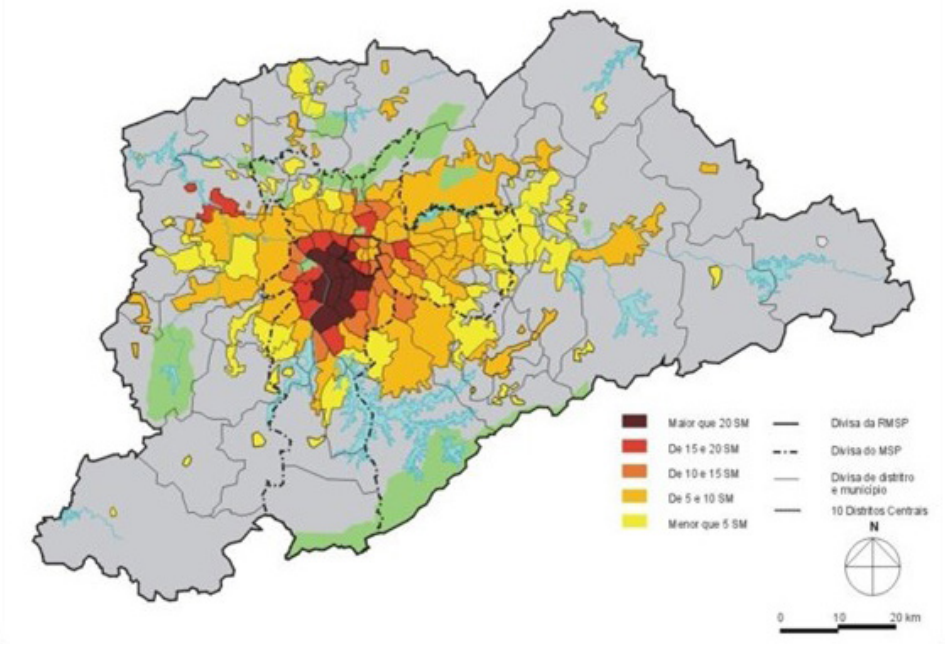


Figure 1.2
The income concentration in São Paulo's metropolitan area
Source: Prepared by Eduardo Nobre based on CESAD (2002) and data from IBGE (2000).

and informal settlements in problematic areas, such as high slopes, floodplains, and environmental protection areas. The low-income population that got access to public social housing programs ended up living in neighborhoods lacking urban infrastructure and facilities.

This context is intrinsic to a segregated, fragmented, and unequal metropolis generated by the Brazilian urbanization process, as Villaça (1998) demonstrates in his work. The technical instruments of urban planning, which emerged with the advent of the Republic and reached its peak during the Military Dictatorship (1964-1985), was used in an ideological way to legitimize this historical process (VILLAÇA, 1999).

However, after the country's re-democratization process, social and professional movements, congregated around the National Movement for Urban Reform, managed to include the discussion for fairer, more inclusive, and democratic cities in the 1988 Federal Constitution (BRASIL, 1988). Since then, several municipalities have begun reviewing their planning tools to promote a more socially equitable and environmentally balanced urban development. The Urban Policy Chapter pointed out master plans as the fundamental tool to ensure that the social function of urban property was being fulfilled, as can be seen below (BRASIL, 1988, article 182):

> Article 182. According to general guidelines outlined in the law, the municipal government's urban development policy aims to ordain the enforcement of the social functions of the city and to ensure the well-being of its inhabitants.
>
> Paragraph 1. The master plan, approved by the City Council, which is compulsory for cities of over twenty thousand inhabitants, is the primary tool of the urban development and expansion policies.

> Paragraph 2. Urban property accomplishes its social function when it meets the fundamental requirements for the ordainment of the city as outlined in the master plan.

In this context, several left-wing municipal administrations developed their master plans based on new tools that seeked to promote the social function of the city and the property (VILLAÇA, 1999).

For example, the master plan draft proposed by mayor Luiza Erundina (1989-92) dates from the 1988 Constitution enactment. This draft addressed planning tools such as the: Compulsory Parcelling, Building, and Utilization (PEUC, Portuguese: *Parcelamento, Edificação ou Utilização Compulsórios*), Social Interest Special Zones (ZEIS), Consortium Urban Operations (OUC), Additional Building Rights Levy (OODC) and the Urban Development Fund (FUNDURB) (SÃO PAULO, 1991). However, despite the efforts undertaken by mayor Luiza Erundina to sponsor the Bill 02/1991 draft, the opposing political forces in the City Council did not release it for a vote. As a result, the draft bill was shelved by mayor Paulo Maluf (1993-1996) (NOBRE, 2019).

In 2001, the City Statute established the legal framework for urban planning and the appropriate legal, tax, and urban-regulation tools (BRASIL, 2001). The statute also set forth that the master plan must be compulsory for cities of over twenty thousand inhabitants. Then, mayor Marta Suplicy's office (2001-2004) submitted her master plan version to several public hearings to meet the legal specifications for a participatory process. As a result, the City Council finally approved the São Paulo 2002 Master Plan under Law 13,430/2002 (SÃO PAULO, 2002). The plan's general principles were the right to the city for all[3], the social function of the city and property, and public transportation as a priority in the mobility agenda.

3. According to the 2002 Strategic Master Plan, the right to the city is to access the urban land, housing, environmental sanitation, urban infrastructure, transport, and public services.

In order to achieve theses goals, the plan's strategy intended to implement land value capture tools and to rationalize the use of urban infrastructure to avoid idle land. Furthermore, the plan intended to regularize land within informal settlements and o provide urban facilities for the low-income populations. Finally, the 2002 Master Plan brought back the planning tools proposed in the 1991 Master Plan and defined by the City Statute, such as PEUC, ZEIS, OODC, OUC and FUNDURB, mentioned before.

The City Statute estabilishes that master plans must be reviewed every ten years. Thus, Fernando Haddad's office (2014-2017) was responsible for reviewing the 2002 Master Plan with the support of public hearings. The City Council approved Haddad's review under Law 16,050/2014, defining as its general Urban Development Policy principles:

- The social function of the city and of urban and rural properties;
- Equity and socio-territorial inclusion;
- The right to the city and the right to access an ecological-balanced environment and to democratic management.

Besides the existing instruments, new instruments were added into the 2014 Master Plan such as the Solidarity Share, the Dwelling Share (Portuguese: *Cota Parte Máxima de Terreno por Unidade*), the Environmental Share, Urban Intervention Projects (PIU, Portuguese: *Projetos de Intervenção Urbana*), Local Structuring Areas (AEL, Portuguese: *Áreas de Estruturação Local*), in addition to instituting the basic citywide Floor Area Ratio (FAR)[4].

4. According to Table 1 – attached to Law Nº 16,050/2014, Floor Area Ratio (FAR) is the measurement of a building's floor area in relation to the size of the lot/parcel that the building is located on. It can be: Basic, resulting from the building potential free of charge fixed to urban lots and plots; Maximum, which cannot be exceeded; Minimum, when land is considered underutilized.

THE REAL ESTATE MARKET AND RECENT TRANSFORMATIONS

Even though master plans include proposals of urban interventions and public policies that go beyond the mere control of real estate growth, some of the urban tools defined by master plans and zoning itself are directly and intrinsically related to real estate dynamics as they affect upcoming urban growth. Thus, it is crucial to discern the city's real estate dynamics to understand the feasibility of applying the tools.

The city of São Paulo has traditionally been represented by a thriving real estate market resulting from the great concentration of wealth and economic activities and its fast-growing population. That can be seen both from a formal point of view, of urban growth in the normative framework, and informal, which is at odds with the first picture (ROLNIK; KOWARICK; SOMEKH, 1990).

The capital surplus generated by the coffee-based economy ran the urbanization process. It subdivided farmhouses nearby the current São Paulo Downtown to accommodate the fast-growing number of inhabitants. Still, in the first two decades of the 20th century, intensified after 1930, the inner city underwent a redevelopment process specializing in retail uses. Finally, in the 1940s, the rapid increase of high-rise housing developments for the middle and upper classes began to multiply in the neighborhoods of Vila Buarque and Higienópolis.

From the 1960s onwards, middle- and upper-class real estate development moved towards the city's Southwest Quadrant, as defined by Villaça (1998)[5]. To carry it out, a financing system was structured by the Military Regime (1964-1985) that created the Housing Finance System (Portuguese: *Sistema Financeiro Habitacional*) and the Brazilian System of Savings and Loans (Portuguese: *Sistema Brasileiro de Poupança e Empréstimo*).

5. According to Villaça (1998), the main characteristic of the structuring process of Brazilian metropolises is socio-spatial segregation, a result of the dispute over locations by different social classes. In this dispute, the ruling class appropriates the areas best equipped with infrastructure, services and equipment, constituting the Areas of Great Concentration of High Income (AGCAR, Portuguese: Áreas de Grande Concentração de Alta Renda). In São Paulo's case, this area goes from the Southwest Quadrant to the Center, composed by the districts of Alto de Pinheiros, Butantã, Campo Belo, Itaim Bibi, Jardim Paulista, Moema, Morumbi, Pinheiros, Santo Amaro and Vila Mariana.

The period known as Brazil's Lost Decade (in the 1980s) made the country suffer from sluggish economic growth and recession, consequently affecting the public and private sectors' investment capacity and strongly impacting the real estate market. Furthermore, the extinction of the National Housing Bank (BNH, Portuguese: *Banco Nacional de Habitação*) and the lack of an effective housing policy significantly aggravated housing provision for most income groups, especially the ones who needed most, which increased urban informality, as already mentioned. But, on the other hand, high-rise apartment buildings spread to areas beyond the Southwest Quadrant as developers searched for cheap land to buy in Northern and Eastern lower-middle-class neighborhoods such as Lapa, Santana, and Tatuapé (SÃO PAULO, 1992).

In the 1990s, the adoption of neoliberal ideas by the Federal Government reformed the real estate market, as reported by several scholars (ROYER, 2009; FIX, 2011; RUFINO, 2017). According to Rufino (2017), the Real Estate Investment Funds and Mortgage Portfolios were the first financing tools for real estate production linked to the capital market. They followed the equivalent restructuring process alike in the Global North.

The creation of the Real Estate Financial System (SFI, Portuguese: *Sistema Financeiro Imobiliário*) in 1997 and the approval of the Special Tax Regime and the Equity of Affectation Law (Portuguese: *Lei do Patrimônio de Afetação*) in 2004 contributed to consolidate the real estate market as an alternative for financial investments. Consequently, it ensured the securitization of real estate assets and the interest of financial agents and investors.

From the 2000s onwards, the Real Plan stabilization program provided a favorable context for real estate production, increased by opening large development companies' capital on the stock exchange. Rufino (2017) describes how the real estate had grown in the period:

> In the first fundraising cycle, between 2005 and 2007, 25 development companies predominantly located in the Rio-São Paulo axis managed to raise around R$ 12 billion[6]. Thus, it helped consolidate the real estate sector as an essential area of the financial capital market. Moreover, it attracted significant attention from foreign investors, representing more than 75% of this volume of capital flows (RUFINO, 2017, p. 108).

Such changes in regulatory frameworks and the economic environment significantly changed São Paulo's real estate dynamics, as shown in the chart below (Figure 1.3). The chart displays data of one of the leading real estate consulting companies, Embraesp (*Empresa Brasileira de Estudos de Patrimônio*).

Other important facts that had positive impacts, enabling greater institutional security or the transfer of a more significant amount of resources to the real estate market, were: the implementation of the Cruzado Plan (Portuguese: *Plano Cruzado*] (1986)[7], the creation of the Real Estate Financial System (1997), the launch of the Initial Primary Offer (IPO) for the real estate sector on the Stock Exchange (2007), and the launch of the Minha Casa Minha Vida Program (PMCMV, Portuguese: *Programa Minha Casa Minha Vida*) (MCMV) (2009)[8].

On the other hand, national and international issues that affected the supply of credit harmed the real estate market, such as the Collor Plan (Portuguese: *Plano Collor*) (1990)[9], the Asian Crisis (1997), and the American Subprime Crisis (2008).

6. Approximately US$ 6.8 billion at that time.

7. TN: Cruzado Plan was an anti-inflationary program launched by the Federal Government in 1986 that included wage and price freezing to fuel the economy.

8. TN: MCMV was a large-scale public housing nationwide program tasked with constructing homes as part of a broader effort to upgrade and modernize the nation's cities, especially to low-income families.

9. TN: Collor Plan is the name given to a collection of economic reforms and inflation-stabilization plans combining fiscal and trade liberalization with radical inflation stabilization measures.

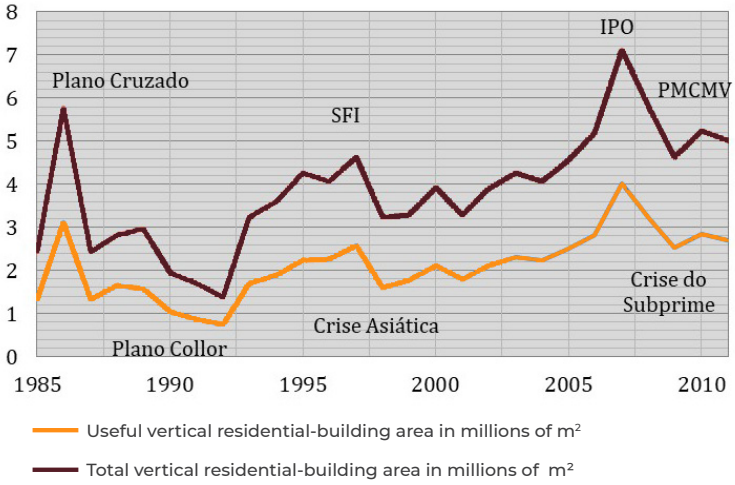


Figure 1.3 **High-rise housing developments launching evolution in São Paulo – 1985-2010** Source: Prepared by Eduardo Nobre based on data from Embraesp.

Yet, Figure 1.3 corroborates Rufino's thesis (op. cit.) that São Paulo was one of the most benefited for the real estate growth in the period. As can be seen, between 1985 and 2007, the total area of high-rise residential buildings almost tripled, going from 2.4 to 7 million square meters per year. These numbers were reduced to 5 million square meters during the economic crisis, which still remains above inicial numbers.

Until 1994, the most valuated locations remained the traditional districts[10] within the Expanded Center[11] and the Intermediate Ring[12], close to the metro lines[13], as shown in Figure 1.4. Such projects took place in high building potential zones (Z3, Z4, and Z5[14]) but also in low-potential zones for urban densification[15] under the Interconnected Operation planning tool. Established in Municipal Law 10.209/86 and revised in Municipal Law 11,773/1995, this tool allowed to reconsider the FAR in particular land, if investments in Social Housing (HIS) were done in exchange.

10. Campo Belo, Consolação, Bela Vista, Liberdade, Moema, Perdizes, Pinheiros, and Vila Mariana.

11. NT: Expanded Center (*Centro Expandido*, in Portuguese) of São Paulo is an area of districts north, east, south, and west to the historic downtown, enclosed by the Tietê and Pinheiros rivers.

12. NT: Its limits are a ring of avenues characterized as the location that divides the city's

Since 1995, there has been a greater spread of high-rise residential developments concentrated in the Expanded Center and districts within the Intermediate Ring. Thus, for example, Vila Andrade and Vila Sônia, in the West Zone; Cursino, Sacomã, and Ipiranga, in the Southeast, Carrão, Vila Formosa and Aricanduva, in the East Zone; and Tucuruvi, Mandaqui, and Tremembé in the North Zone, as shown in Figure 1.5.

From 2005 to 2014, this pattern of concentration remained. However, as Interconnected Operations[16] ended, the projects were concentrated on the Medium and High-Density Mixed-Use Zones and not in the Centrality Zones, as expected by the 2002 Master Plan, which can be seen in the map in Figure 1.6.

More recently (2015-2019), it has been possible to perceive the inducing force of the 2014 Master Plan and the 2016 Zoning Law. Most high-rise developments were concentrated along with the Urban Transformation Structuring Zones (ZEU, Portuguese: Zona de Estruturação da Transformação Urbana) as shown in the map in Figure 1.7. These zones are portions of the territory intended to promote residential and non-residential uses with high demographic and constructive densities, fostering an urban design that integrates public spaces with the public transport system.

New land use rules, considering the subdivision and occupation, complemented the regulation, allowing services and public facilities developments. Thus, these zones began to play a strategic role in making the plan's objectives feasible.

central and peripheral regions.

13. Line 1 Blue (North-South) - Santana, Saúde and Jabaquara; Line 3 – Red (East-West) - Barra Funda, Mooca, Tatuapé, and Penha.

14. Z3 – predominantly residential zone with medium population density; Z4 – mixed-use zone and medium-high population density; Z5 – mixed-use zone and high population density.

15. Mainly in Z2 – a predominantly residential area with low population density.

16. The Interconnected Operations were judged unconstitutional by the Federal Court of Justice as they granted the authority to the Executive Power to change the Zoning Law parameters that were exclusive to the Legislative Power.

Figure 1.4 **São Paulo's locations of high-rise housing developments launching – 1985 to 1994** Source: Elaborated by Marina Marques based on data from Embraesp.

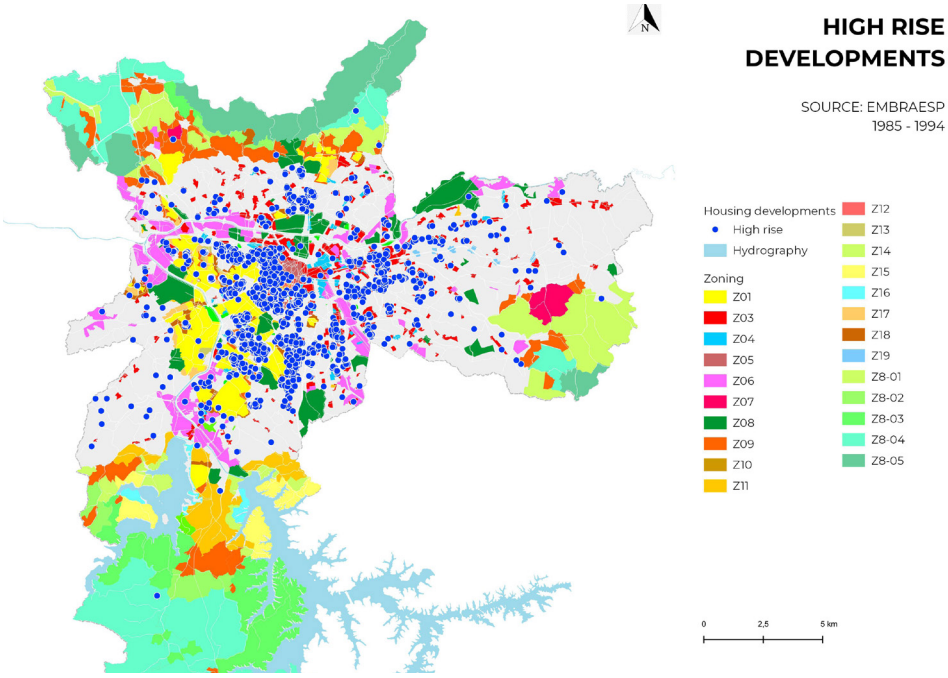


Figure 1.5 **São Paulo's locations of high-rise housing developments launching – 1995 to 2004.** Source: Elaborated by Marina Marques based on data from Embraesp.

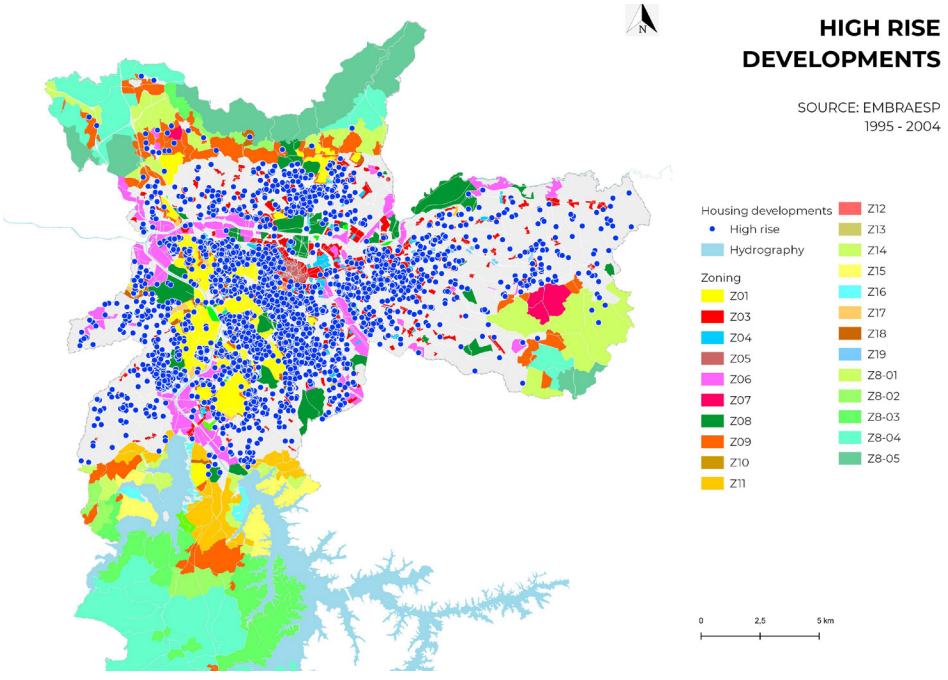


Figure 1.6 **São Paulo's locations of high-rise housing developmentss launching – 2004 to 2014** Source: Elaborated by Marina Marques based on data from Embraesp.

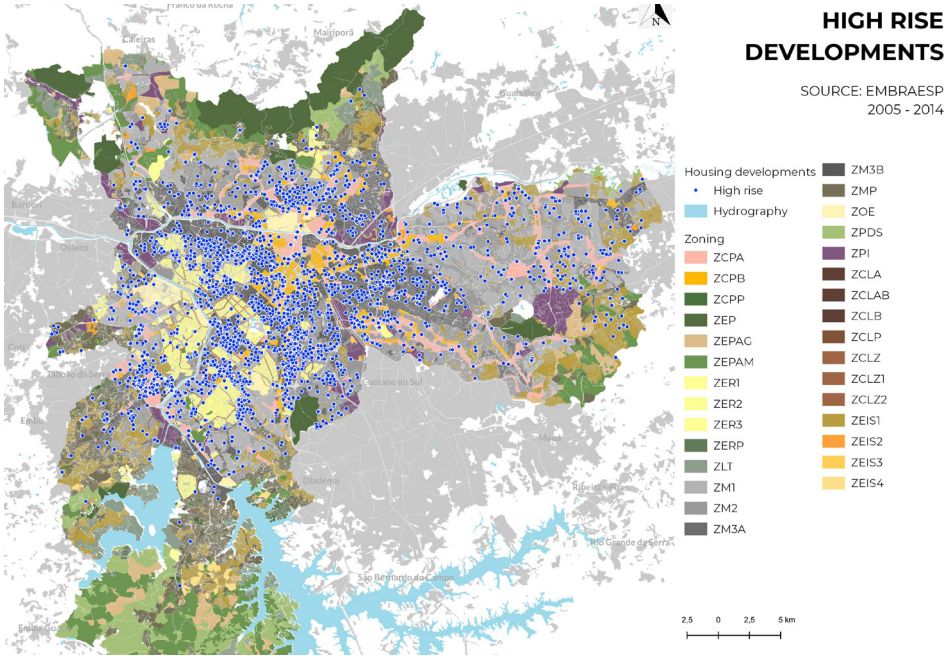
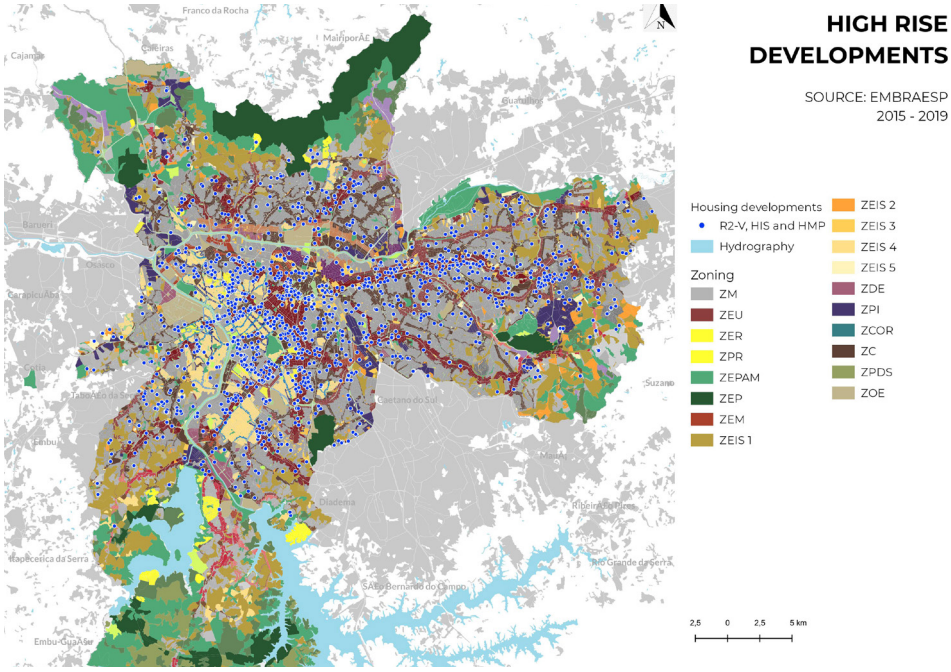


Figure 1.7 **São Paulo's locations of high-rise housing developments launching – 2015 to 2019** Source: Elaborated by Marina Marques based on data from Embraesp.



THE IMPACT ON THE CITY'S URBAN STRUCTURE

Since then, the transformations of São Paulo's real estate market have caused alterations to the city's urban structure, specially the central region "urban decline" process (economic and population emptiness) experienced since the 1960s. As a result, many real estate projects spurred again in São Paulo's central area, leading to the population decrease reversal between the 1990s and 2000s, which was intensified from 2000 to 2010.

The figures below demonstrate population and household growth in the central districts, according to the 2000 and 2010 demographic census data (IBGE, several years). The households of Sé Borough (Portuguese: *Subprefeitura da Sé*) increased 27%, from 140 to 178 thousand. The population increased 15%, resulting in 57 thousand newcomers out of 431 thousand residents. This central area dynamics represented 10% of the total number of projects launched in the city, positioning this borough at the top of new housing units' construction.

Sé Borough has become one of the real estate sector focus for medium and high-income buyers, either because of the significant incentive of Urban Operations or changes in the market's preferences, such as the scarcity of building stock in other sites, the changes effected in the real estate sector's regulatory framework, the opening of the capital for large developers, and even the expansion of real estate credit from 2010 onwards. Thus, the economic interest in São Paulo Downtown kicked off a process that reversed the population decline as already mentioned.

Since 2014, the Sé Borough's participation rates have been continuously expanding in the city's real estate market; in 2017, reached 18% of the apartments launched for sale, equivalent to 5,048 new housing units, according to a survey published by the Municipal Department of Urbanism and Licensing (SMUL, 2018).

The survey points out the high price of properties and also high building density, equivalent to 6.5 times the plot area, on average. They are usually 18-story buildings constructed in a single lot area with 41 square meters apartments including 1 or 2 bedrooms. As apartments' sizes decreased, prices in the Sé Borough increased significantly, transforming it into one of the most expensive regions to buy new housing units in São Paulo.

Another survey by the city administration showed a dissociation between the price and the useful area of the property due to real estate speculation. They are properties used as investments and not necessarily intended for dwelling purposes by their buyers. Conclusions point out that, in Sé's surroundings, one pays more for less space (in terms of footage), unlike real estate launches in other city districts. Therefore, Sé figures among those districts with the highest prices per usable area and the smallest size. Such changes in real estate dynamics are seen in the figures below, showing an increase in population and household density in the central area (Figures 1.8 to 1.11).

Figure 1.8 **Demographic density in São Paulo Metropolitan Area - 1997**
Source: Elaborated by Marina Pinheiro Marques from Metro data.

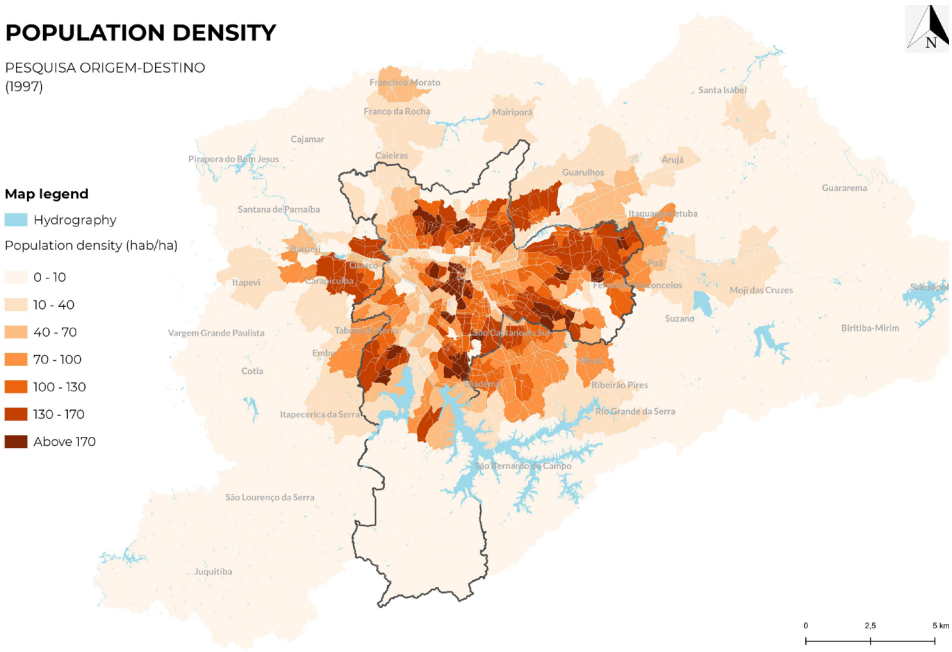


Figure 1.9 **Demographic density in São Paulo Metropolitan Area - 2017**
Source: Elaborated by Marina Pinheiro Marques from Metro data..

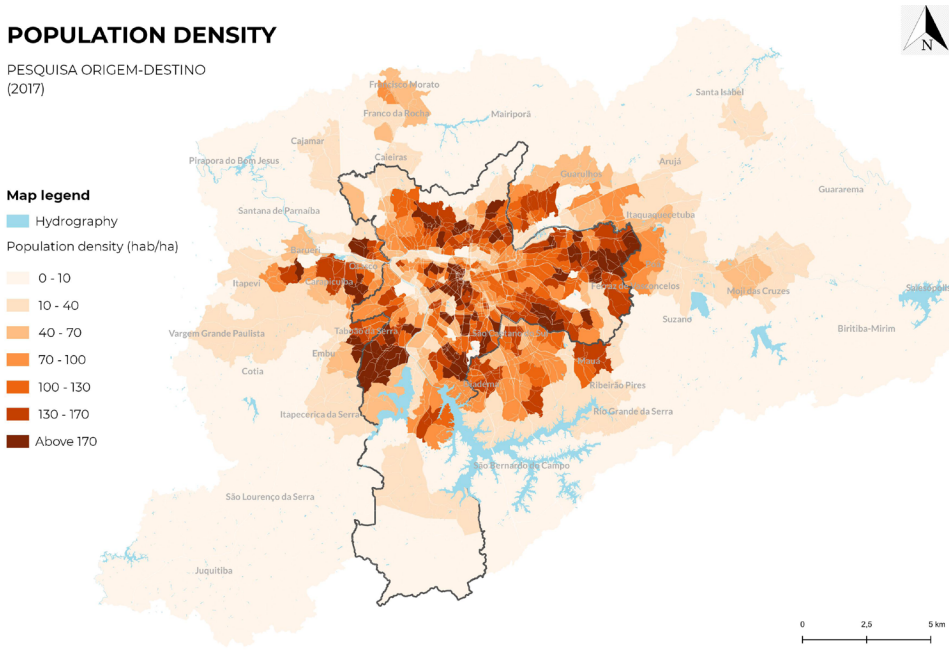


Figure 1.10 **Household density in São Paulo Metropolitan Area - 1997**
Source: Elaborated by Marina Pinheiro Marques from Metro data.

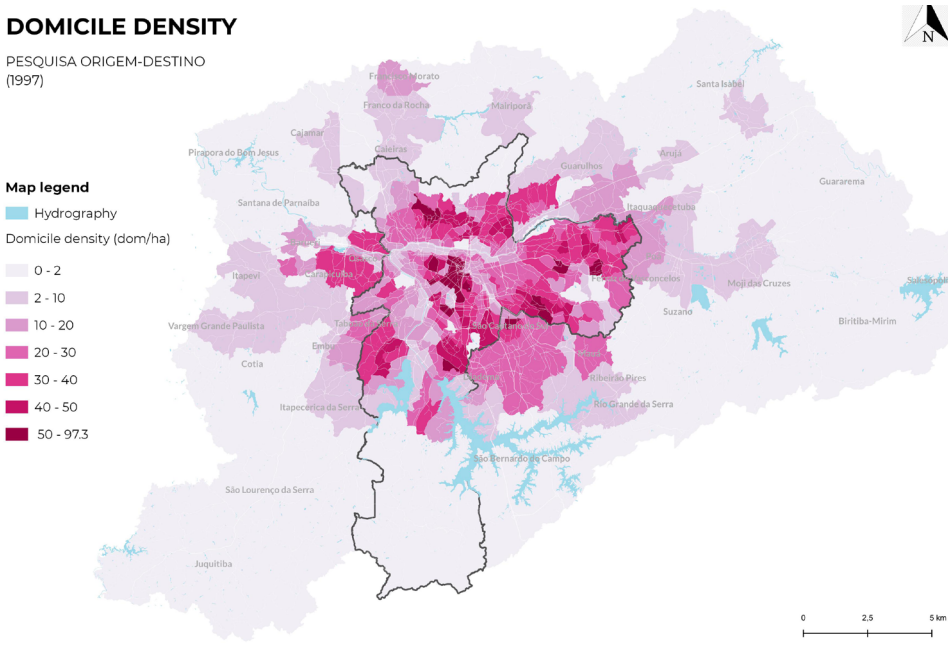
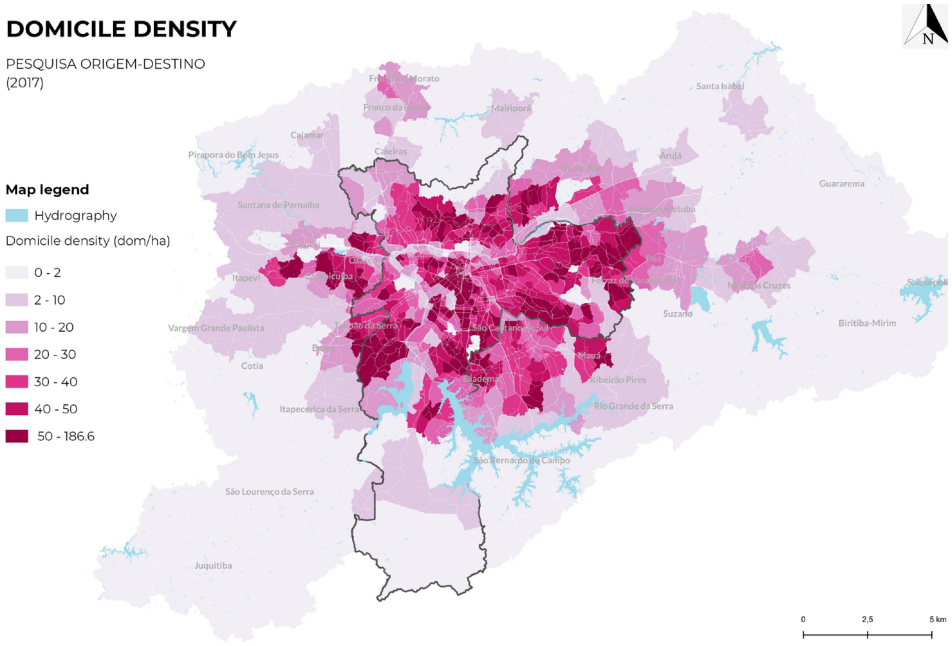


Figure 1.11 **Household density in São Paulo Metropolitan Area - 2017**
Source: Elaborated by Marina Pinheiro Marques from Metro data.



Furthermore, there was an increase in population and household densities in several districts within the Intermediate Ring, where real estate's performance was intense. Besides, the increase in densities in specific communities within the Peripheral Ring occurred due to the considerable growth of precarious settlements caused by the lack of public policies aimed at the low-income population and the resulting increase in poverty caused by economic crises.

However, there was almost no change in the urban structure regarding concentration patterns of employment-generating activities and income social classes, as shown in Figures 1.12 to 1.15. Thus, the Southwest Quadrant remains holding the highest jobs (above 130 per hectare) and income social classes (above 15 minimum wages in 1997 or equivalent to 7 minimum wages in 2017) concentration.

To sum up, formal and informal real estate activity caused a sprawling increase in household densities in the São Paulo metropolitan area. It helped enhance the demographic density in some localities without altering the traditional spatial patterns of jobs and income concentration.

Figure 1.12 **Employment density in São Paulo Metropolitan Area - 1997**
Source: Elaborated by Marina Pinheiro Marques from Metro data.

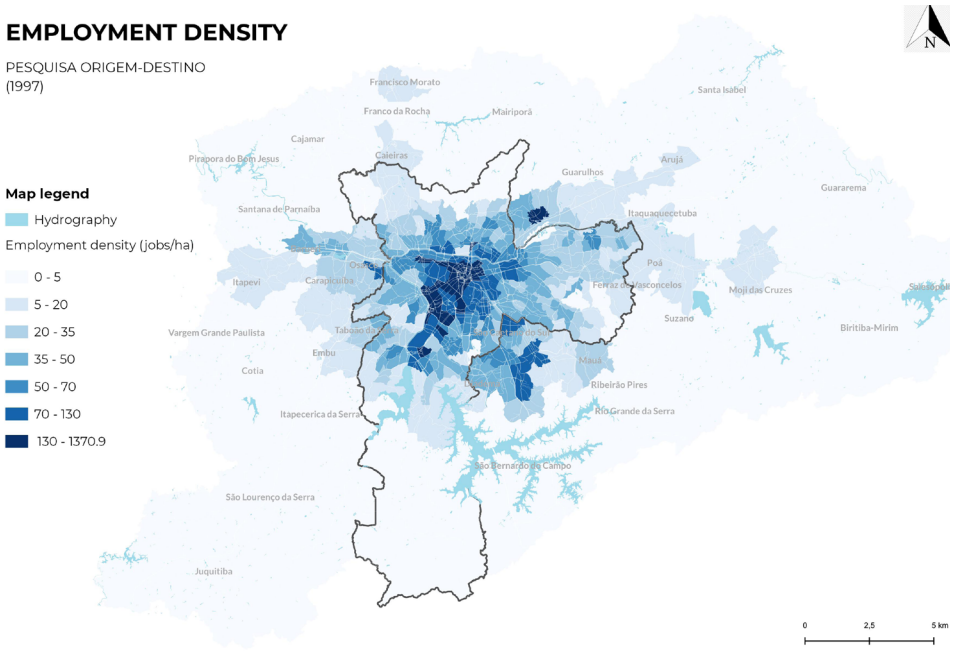


Figure 1.13 **Employment density in São Paulo Metropolitan Area - 2017**
Source: Elaborated by Marina Pinheiro Marques from Metro data.

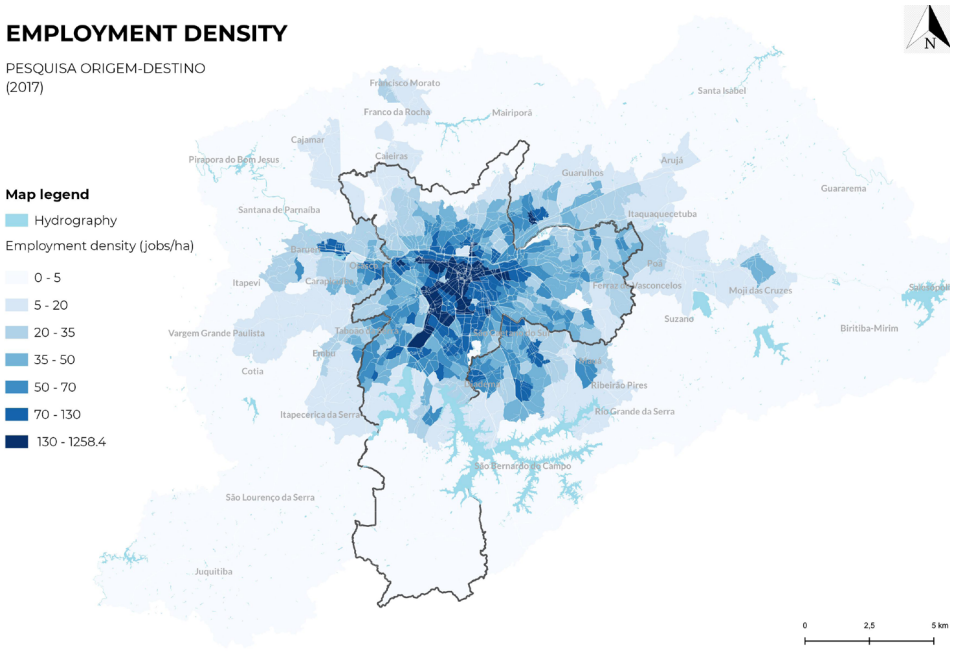


Figure 1.14 **Average family income in São Paulo Metropolitan Area - 1997**
Source: Elaborated by Marina Pinheiro Marques from Metro data.

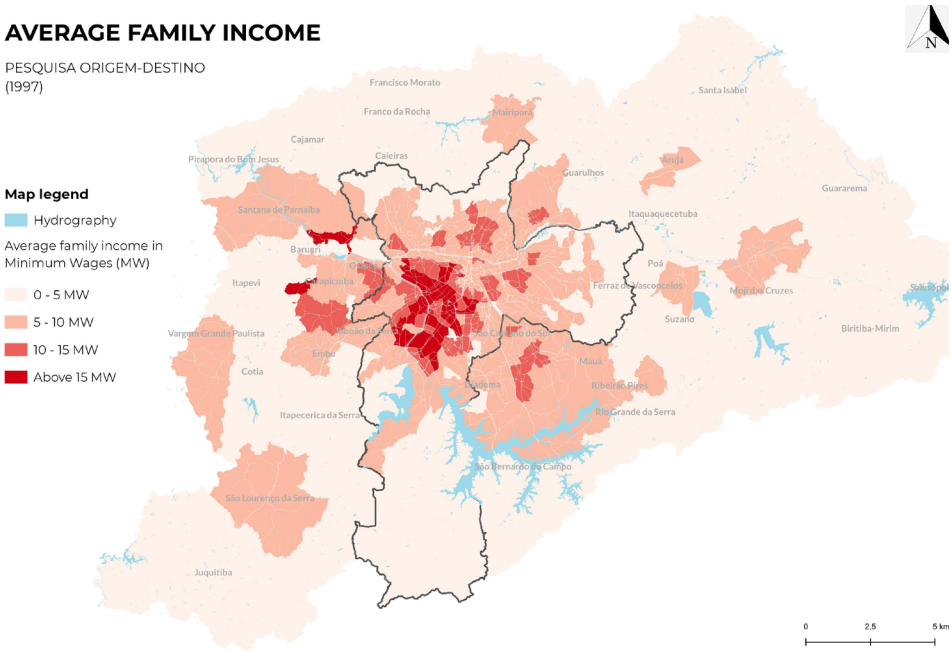
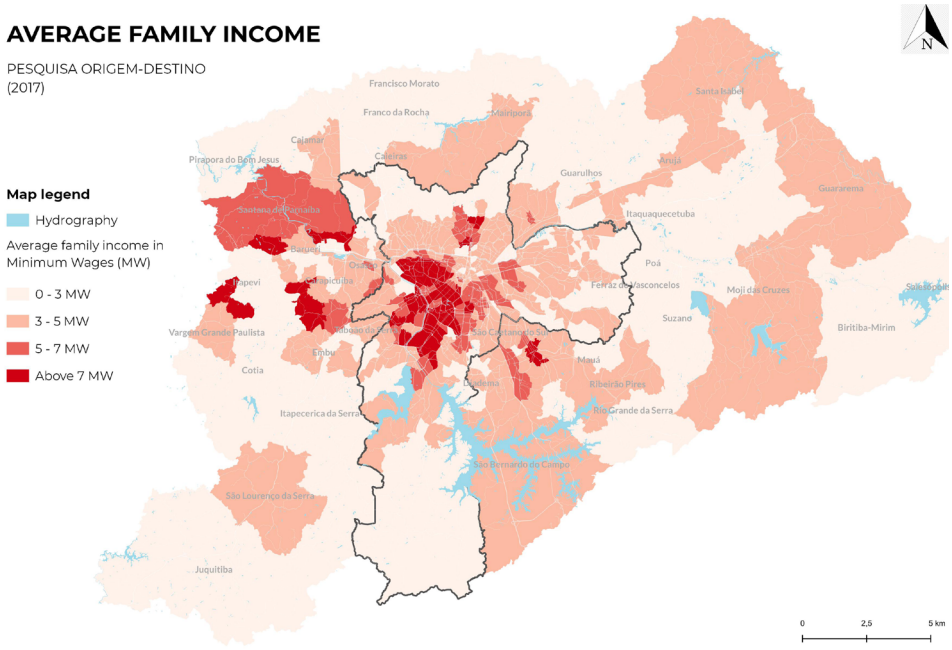


Figure 1.15 **Average family income in São Paulo Metropolitan Area - 2017**
Source: Elaborated by Marina Pinheiro Marques from Metro data.



CONCLUSIONS

The current review processes on the city's regulatory framework showed quite different economic contexts throughout the years. For example, the master plan review activities began in 2013 when the Brazilian economy declined, even though it presented relatively high indicators at the end of that year. Besides, the approval of the 2014 master plan experienced the same 2013's scenario, which remained constant during 2014.

The zoning law revision underwent the same context in 2015, resulting in a new zoning law; however, between 2016 and 2013, much of the previous economic context had changed. Another round of financial crisis was about to come up, resulting in the revision of article 174 (the 'anti-crisis' article). It expanded benefits for building apartments based on market standards in the ZEU. Nevertheless, it happened without considering if this article's benefits were consistent with the social and urban transformations towards a healthy economy for the city, not just for some boroughs.

These types of changes and transformations, mainly in the economic sector, visibly impacted urban areas. Nevertheless, they must be interpreted and analyzed to learn the impacts on the structuring elements of the metropolis. Even though such urban transformations are fast and dynamic, traditional urban relationships have remained consolidated and perennial. The Southwest Quadrant continues to hold the greatest concentration of jobs and income. Its influence extends beyond the city limits, despite São Paulo applying two master plans to counterbalance the urban structure's inequalities. Such dynamics has impacted the index's constructions presented in this research and this same city's region.

The common sense that master plans or their land-use tools apart are compelling enough for the structural transformation of the city is often mistaken. Yet, understanding the various specificities regarding urban norms and mechanisms is crucial to learn to what extent they support the city project socially determined in the Master Plan – despite and beyond the constant shifts and crises that reshape urban space.

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PART 1

URBAN POLICY FINANCING TOOLS

URBAN POLICY FINANCING TOOLS

The provision of urban infrastructure generally represents a huge cost to the public sector. On the other hand, landowners usually capture financial gains from public investment on improvements, on the form of higher rents, property or land sales. Another public action that generates gains for landowners is zoning changes. For example, changes in land use from rural to urban, from more restrictive zones to more permissive zones, or FAR increasing (upzoning) directly influence real estate value.

As a result, several cities worldwide have been charging landowners for improvements as a way to capture to the government part of the gains generated by investments and thus bear the urbanization costs of other sites.

Financing tools for socializing gains date from the 1970s in the city of São Paulo. The Spanish, Italian, French, and American experiences greatly influenced new financing tools and legal devices. Examples are the conceptual differentiation of the right to build from the right to own the property, land value capture (LVC), compulsory urbanization, preemption law, and the Transfer of Development Rights (SÃO PAULO, 1979).

The main emphasis relies on the concept of *Solo Criado*, which is the "built area that exceeds a certain proportion of the plot area" (AZEVEDO NETTO et al., 1977, p. 9). This concept emerged in 1975 from the studies made by public administration officers linked to the Center of Studies and Research on Municipal Administration (CEPAM, Portuguese: Centro de Estudos e Pesquisas de Administração Municipal) (MOREIRA et al., 1975). Later, seminars led by CEPAM and the Brazilian Institute of Architects (IAB, Portuguese: *Instituto dos Arquitetos Brasileiros*) widely helped to disseminate this concept to the press (Memorando, 1977).

The following chapters will analyze the basic concepts that helped institutionalize financing tools such as the Consortium Urban Operation, the Additional Building Rights Levy, and the Transfer of Development Rights.

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2 The experience of Consortium Urban Operation in São Paulo

WHO WINS AND WHO LOSES?

Eduardo Alberto Cusce Nobre

Abstract

This chapter analyzes the São Paulo experience in implementing the Consortium Urban Operations. Besides, it identifies the social strata that benefited most from this experience. To this end, it was carried out a implementation review from the conception to practice experiences according to each urban operation implemented in the city. Subsequently, the operations' impacts were evaluated based on the funds raised and spent by type of work to understand which social strata benefited the most from this tool.

Keywords

Consortium Urban Operation, public-private partnerships, socio-spatial impacts, São Paulo.

PREVIOUSLY CONSORTIATED URBAN OPERATIONS

The planning tool known as Consortium Urban Operation is closely associated with the principle of *Solo Criado*, which comes from a series of studies carried out by the São Paulo Metropolitan Planning Company (Portuguese: *Empresa Paulista de Planejamento Metropolitano S.A.*) (EMPLASA) in 1976. EMPLASA supported the execution of Consortium Urban Operations in order to follow the urban guidelines addressed by São Paulo Metropolitan Area Report – Diagnosis 75 [*Relatório Região Metropolitana de São Paulo – Diagnóstico 75*]. The intention was to provide Urban Operations "a more effective role in the urbanization process, acting more decisively and innovatively, that is, assuming responsibilities as **an urban development agent**" (EMPLASA, 1976, p. 2, underline in the original text).

The international influence in conceptualizing Consortium Urban Operations, mainly influenced by the French *Zones d'Aménagement Concertée* (ZAC), can be seen in the following quote:

> The experience of England, Germany, the U.S. and, **particularly, France** has shown that public authorities can intervene locally in areas considered strategic for urban development, and, even more, obtain economic benefits arising from the **added value generated by it**, in addition to satisfactory social and technical results, which makes it possible to subsidize public facilities and low-income housing (EMPLASA, 1976, p. 3, bold ours).

Later, the concept appeared again in similar studies carried out by the São Paulo Municipal Planning Secretariat (Portuguese: *Secretaria Municipal de Planejamento de São Paulo*) (SEMPLA) during mayor Mário Covas' office (1983-1985). A dossier published back then defined *urban operations* as "integrated sets of

urban interventions executed in certain areas of the city under the Public Power's coordination as a way to address outputs that can achieve the Master Plan goals." Urban Operations were also taken as an innovative, feasible land-use tool for inducing social housing, providing urban infrastructure and communal facilities having the private sector a partner (SÃO PAULO, 1985 apud MONTANDON, 2009, p. 15).

Later, Urban Operations appeared again on the São Paulo Master Plan 1985/2000 proposal, under the same conception (SÃO PAULO, 1985b). Due to the Public Power's limitations in driving urbanization facilities given the 1980s recession, the strategy addressed was to institute a Public-Private Partnership (PPP) to minimize public spending. Thus, it would help to enable social housing and communal facilities and accelerate urban transformations according to the Master Plan guidelines.

The proposal of 1985-2000 defined 35 urban operations to take place in the following neighborhoods: São Miguel, São Matheus, Vila Matilde, Vila Maria, Campo de Marte, Centro, Santo Amaro, Pinheiros, Barra Funda, Vila Nova Cachoerinha, Paraisópolis, and Campo Limpo. On November 27, 1985, mayor Mário Covas sent the draft bill to the São Paulo City Council. One of the leading innovations he added into the draft was "the recover of land gains generated from public investments by the municipality" (SÃO PAULO, 1985c, p. 5).

Nevertheless, following mayor Jânio Quadros (1986-1988) toke the bill out of the City Council before voting it. In turn, Quadros prepared another draft accordingly with his administration's principles and sent it out into vote. Finally, the city Council signed Janio Quadro's draft into

the Municipal Law 10,676/1988 (SÃO PAULO, 1988). In this latter one, Quadros lessened the importance of urban operation by putting the Interconnected Operations at the center of the land value capture planning tools.

This last tool was implemented after mayor Jânio Quadros requested Planning Secretary Marco Antônio Mastrobuono to find a solution to solve the city's favelas. In the contract signed between the City with the World Bank for financing *Programa de Canalização de Córregos, Implantação de Vias e Recuperação Ambiental e Social de Fundos de Vale* (PROCAV)[1], the administration committed itself to provide a housing solution to the slum dwellers to be evicted by the works (AZEVEDO NETO, 1994; NOBRE, 2019).

Mastrobuono defended that each landowner who provided housing for former squatters could earn a "prize" that, in turn, would mitigate their financial expenditures. In addition, such compensation granted by the municipality would guarantee profit for the landowners from upcoming projects supposed to take place in the"emptied" lands.

In 1986, the Municipal Law 10,209/1986 was enacted. Known as the FavelaRemoval Law (Portuguese: *Lei do Desfavelamento*) and also as the Interconnected Operation Law, afterwards revised by the Municipal Law 11,773/1995 (SÃO PAULO, 1995b). Thus, it'd become possible to modify the Floor Area Ratio (FAR) and land use characteristics of the areas occupied by favelas in exchange for the construction of low-income housing units, instituting the concept of *Solo Criado* for the first time.

1. NT: PROCAV was a program aimed at stream channeling, roads implementation, and social & environmental recovery of flood plain areas.

Interconnected Operations aimed to modify land use parameters, clear off favelas, and relocate the evicted population in newly built housing units. The increased FAR would occur in exchange for the landowner paying a counterpart to the city administration in cash or providing social housing works. Then, the interested party had to submit a project with an economic feasibility study and favela registration attached to be assessed by the Zoning Commission under the SEMPLA supervision.

Interconnected Operations lasted from 1986 until 1998. This latter year, the State Public Prosecutor's Office filed a Direct Action of Unconstitutionality (Portuguese: *Ação Direta de Inconstitucionalidade* – ADIN) in the State Court of Justice against them. They argued that Interconnected Operations granted the prerogative to the Executive Power to change the zoning, which was inherent to the Legislative Power. As a result, Interconnected Operations were deemed unconstitutional and finally backed out of urban planning's tools in 2000.

While Interconnected Operations lasted, the city's administration fundraised approximately US$ 206 million[2]. However, it delivered only 3,348 housing units, far below the expectation of 11,000 units. In addition, a City Council Parliamentary Inquiry Commission (CPI) found irregularities as the lack of well-defined technical criteria seemed to grant undue concessions to real estate developers.

Scholars also criticized the effect of Interconnected Operations on amplifying the city's socio-spatial segregation (VAN WILDERODE, 1995). As new ventures were developed in the city's most valued sites, social housing units were built in the impoverished outskirts, as shown in Figure 2.1.

2. The original 1998 value was updated through CPI Inflation Calculator. Available at: https://www.officialdata.org/us/inflation/1998?amount=122498608. Access: 08/nov/2021

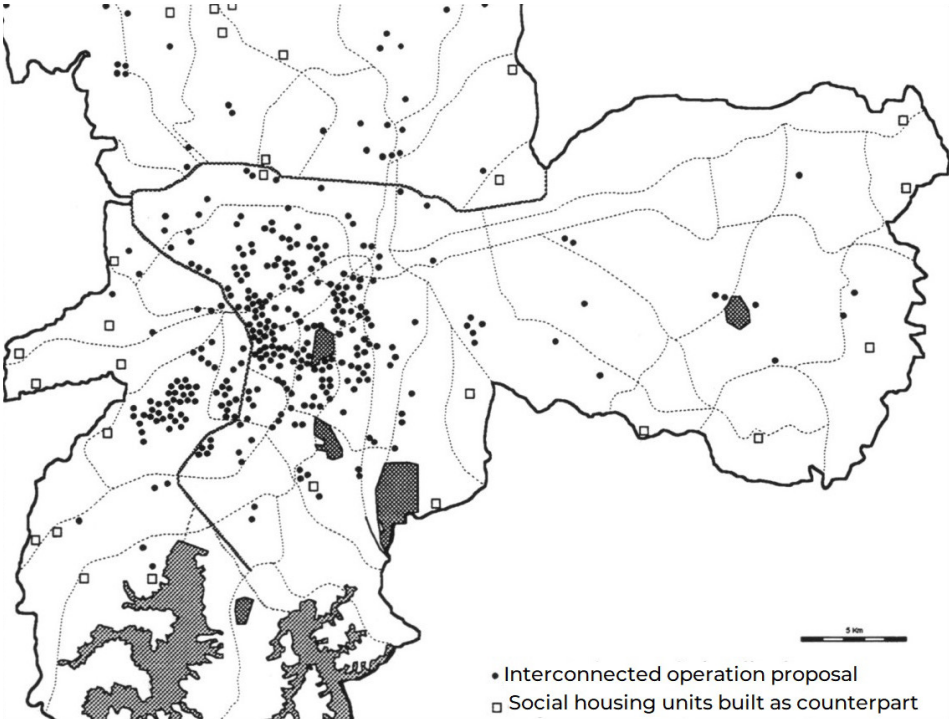


Figure 2.1
Location of Interconnected Operation and counterpart's social housing commitments
Source: Van Wilderode (1995).

The following office (Luiza Erundina, 1989-1992) took up the original concept of urban operation in a Master Plan draft (SÃO PAULO, 1991a). Despite the fact the Master Plan was not approved, Municipal Law 11,090/1991 (SÃO PAULO, 1991b) enacted the first urban operation - Anhangabaú Urban Operation. This law aimed to preserve the urban historical, cultural, and environmental heritage of São Paulo City Center. It also wished to promote better use of underutilized properties and indicated actions to upgrade public space. However, Anhangabaú's experience failed due to the lack of interest from the real estate market in investing in the city's Historic Center. As said earlier, most of the investors had only eyes for the city's Southwest Quadrant districts redevelopment.

Urban Operations became an effective planning tool in 1995 by mayor Paulo Maluf (1993-1996). At that time, Maluf launched the Faria Lima Urban Operation within São Paulo's Southwest Quadrant. Subsequently, Faria Lima turned out to be the first urban operation "to produce effective financial results, that is, to **generate a self-financing environment through charging additional building rights** without burdening municipal budget and finances" (EMURB, 2008, p. 47, bold ours). In 2001, the City Statute ruled at the national level the Urban Operation as a planning tool and renamed it - Consortium Urban Operation. The Statute's Article 32 defines it as:

> A consortium urban operation is a set of interventions and actions coordinated by the municipal government, with landowners, dwellers, permanent users, and private investors to achieve urban structural transformations, social and environmental improvements (BRASIL, 2001, art. 32, paragraph 1).

According to the City Statute, a specific municipal law must approve an consortium urban operation based on the master plan guidelines and define its area. The law's determinations allow applying the following measures:

I. Change the parameters for land subdivision, use, and occupation —besides, alterations to building regulations, considering the environmental impact.

II. Regularize constructions, retrofits, or expansions carried out disagreement with current legislation

III. Grant incentives for building and using underused urban buildings, technologies that reduce negative environmental impacts and preserve natural resources.

The specific law approving the consortium urban operation will include the appropriate plan, containing at least:

I. Definition of the area.

II. Area basic occupation program.

III. Economic and social service programs for the population directly affected.

IV. Goals.

V. Previous neighborhood impact study.

VI. Compensation by owners, permanent users, and private investors due to foreseen benefits.

VII. Planning control with civil society's participation.

The Statute also declares that municipal governments must only apply the funds raised exclusively within the Consortium Urban Operation area.

Municipal Law 13,430/2002 (SÃO PAULO, 2002) passed 2002 São Paulo's Strategic Master Plan (Portuguese: PDE - Plano Diretor Estratégico) under City Statute's requirements. The 2002 PDE ruled its existing operation consortiuns and suggested nine new ones within the Metropolitan Structuring Macroarea[3], including the following subsectors: Tamanduateí Arch, Tietê Arch, Jurubatuba Arch, and Pinheiros Arch. Despite efforts, they did not pass.

Currently, several cities in Brazil have embraced Consortium Urban Operations as an urban planning tool. According to a National Evaluation and Training Network report for Implementing Participatory Master Plans of the Ministry of Cities (Portuguese: *Rede Nacional*

3. According to the São Paulo's Strategic Master Plan, the Metropolitan Structuring Macroarea "covers areas of the river plains along Tietê, Pinheiros and Tamanduateí rivers articulated with Downtown and extension along the Jacu-Pêssego, Cupecê and Raimundo Pereira de Magalhães avenues and the Anhanguera and Fernão Dias highways. The Metropolitan Structuring Area also counts on a railway system and structural highways that link different municipalities and employment centers. In addition, economic transformation processes and land use patterns are intensively taking place, requiring a balance in the relationship between employment and housing" (SÃO PAULO, 2014, art. 11).

de Avaliação e Capacitação para Implementação dos Planos Diretores Participativos do Ministério das Cidades), in 2011, at least 71% of the Brazilian municipalities run any kind of Consortium Operations (SANTOS JUNIOR; MONTANDON, 2011).

THE EXPERIENCE OF URBAN OPERATIONS IN SÃO PAULO

The concept of urban operation dates back to the 1970s based on the idea of *Solo Criado*, previously tested as a pilot during the Interconnected Operation. The Urban Operation was proposed as an urban development tool based on PPPs - Public Private Partnerships during the late 1980s Brazilian financial crisis.

An specific law to be approved by the majority (three-fifths) of city councillors authorizes each Urban Operation to happen. The authorizing law defines the Urban Operation's perimeter, its respective grant rights, attributes responsibilities to the parties involved,and the operation funding according to the Investment Program.

Counterparts' fundings go to a respective Urban Operation bank account, as having a separate bank account is necessary to avoid intermingling with the public treasury.

As the City Statute declares, the main counterpart is the Certificates of Additional Building Rights (Portuguese: CEPAC – *Certificados de Potencial Adicional de Construção*). CEPAC is a city administration's bond to leverage private money to finance public investment. In return, they represent an economic compensation a developer pays to the city foradditional building rights.

CEPACs correspond to a specific square-meter area depending on the additional building area soldinside the UO's perimeter. First, the city administration must issue the amount of CEPAC determined by the law. Then, it can be traded in auction markets as bonds or used to cover up work expenditures and expropriations.

The City of São Paulo has created six urban operations since 1991. In addition, as of 2001, brand-new urban operations came up while some previous ones had gone through revision to comply with the City Statute's principles, namely: Anhangabaú (terminated); Faria Lima; Água Branca; *Centro* (Downtown São Paulo); Água Espraiada; Rio-Verde Jacu (revoked).

Anhangabaú was the first urban operation created by Municipal Law 11,090/1991. The operation's goals were to encourage protecting urban historical, cultural, and environmental heritage, promote better use of unutilized properties and execute a program of works to improve the quality of public space. However, as already mentioned, Anhangabaú Urban Operation was not very successful due to the lack of interest from the real estate market in São Paulo's downtown area.

Faria Lima Consortium Urban Operation (OUCFL)

A Municipal Law 11,732/1995 (SÃO PAULO, 1995a) established the Faria Lima Urban Operation, which took a 650-acre area within the Southwest Quadrant. Faria Lima had broad support from the real estate market for being a high-end, exclusive location[4]. Therefore, from 1995 to 2004, developers could buy building rights even before legal guidance ruled the CEPACs. Later, as

4. NT: The avenue has recently started to be perceived as some sort of "Brazilian Wall Street" due to the many financial institutions headquartered there or on adjacent streets.

Municipal Law 13,769/2004 (SÃO PAULO, 2004a) revised as an consortium urban operation, the only way to acquire additional building rights in Faria Lima would be by CEPACs.

The conception of Faria Lima Urban Operation stems from the 1970's car-driven urban plan intended to widen and length Avenida Brigadeiro Faria Lima's lanes. In addition, the project predicted interconnecting Faria Lima with several other traffic corridors that crossed valuable, busy business districts in São Paulo. The main goal was to restructure the surroundings' road system for prioritizing motorized vehicles:

- Expansion of Avenida Brigadeiro Faria Lima to connect it to Avenida Pedroso de Moraes and Avenida Hélio Pelegrino then further reaching Avenida República do Líbano;

- Construction of two tunnels named Journalist Fernando Vieira de Mello and Max Feffer.

- Expansion of Faria Lima's Road capacity between Rua Funchal and Rua Haroldo Veloso.

In addition to the road works, the following facilities were provided:

- Construction of a rapid transit hub next to railway and metro stations.

- Urban Renewal of Largo da Batata.

- Upgrading of favelas such as Real Parque (provision of 1,252 new social housing units); Coliseu (260); and Panorama (318).

- Construction of a 6.6-km cycle lane running across Faria Lima's traffic island.

Figure 2.2
Faria Lima Urban Operation's perimeter
Source: Author's elaboration from Digital Base Quadra Viaria[5].

The stock of additional construction area, planned initially at 1.25 million square meters, was later changed to 2.25 million (Municipal Law 13,769/2004). Thus, out of 2.25 million, 940 thousand were already paid off as 1.31 million were left over.

The Faria Lima Urban Operation fundraised R$ 2.5 billion from November 1995 to June 2019. This amount is about a 2.1million square meters additional area, or a R$ 1,154 average value per additional square meter. At that stage, the urban operation had spent R$ 1.9 billion, as:

- 49% on works and services.
- 17% on social housing.
- 10% on Metro stations Line 4 – Yellow works.

5. Available at: http://geosampa.prefeitura.sp.gov.br/PaginasPublicas/_SBC.aspx#. Accessed on July 13, 2018. Original scale: 1: 5,000.

Água Branca Consortium Urban Operation (OUCAB)

Municipal Law 11,774/1995 (SÃO PAULO, 1995c) established the Água Branca Consortium Urban Operation, covering partially the neighborhoods of Água Branca, Perdizes, and Barra Funda. The region holds a good transportation infrastructure, namely:

- Structural roads & expressways (*Marginal do Rio Tietê*[6], Av. Francisco Matarazzo, Av. Marquês de São Vicente).

- Rapid transit (rail Lines 7 – Ruby and 8 – Diamond; and metro Line 3 – Red).

- Barra Funda's Multimodal Transportation Hub.

Água Branca is a former floodplain adjacent to Tietê River that used to be surrounded by industrial sheds. Because of that, Água Branca's population density is low—25 inhabitants per hectare. Thus, the strategic goal was to stimulate the region's urban improvement and design conditions to increase its full development potential. The specific objectives were:

- Execute a set of road improvements & restructuring to provide long-distance infrastructure to connect it to the city's metropolitan area.

- Improve macro and micro drainage systems to reduce flood harm.

- Implement public spaces.

- Implement community facilities.

- Build at least 630 social housing units preferentially addressed to Aldeinha and Sapo favelas dwellers.

6. NT: Marginal Tietê is a section of a highway that runs through São Paulo. The given name comes from the fact that each lane runs along the banks of Tietê River. It is a very important road of São Paulo, connecting the East, North and West portions of the city.

Figure 2.3
Água Branca Urban Operation's perimeter
Source: Author's elaboration from 2001 Orthophoto[7].

The legal guidance determined a 1.2 million square meter additional building stock in Água Branca: 300,000 for residential uses and 900,000 for non-residential uses. As of June 2019, 812,000 square meters were paid off, 300,000 from the residential store, and 512,000 from the latter. Thus, the collection amount was R$ 545 million, at the average cost of R$ 671 per additional built square meter.

The main works were connecting Francisco Matarazzo and Auro Soares de Moura Andrade avenues; creating Fábrica dos Sonhos (a Carnival costume-based factory); providing social housing units; and completing drainage works for the Água Preta stream.

In 2013, Municipal Law 15,893/2013 modified the previous regulatory framework to align it with the City Statute's parameters on issuing CEPACs as compulsory for

7. Available at: http://geosampa.prefeitura.sp.gov.br/PaginasPublicas/_SBC.aspx#. Access at July 13, 2018. Original scale – 1:25,000.

additional building rights. Furthermore, the legislation also followed the Strategic Master Plan's guidelines by presenting an urban plan establishing improvements regarding mobility, green area systems, road capacity & transport infrastructure assessment.

The so-newly revised legislation included 1.85 million additional square meters – 1.35 million for residential and 500,000 for non-residential. The first CEPAC auction occurred on December 24, 2014, but unsatisfactorily had very few interested parties. The city administration sold out only 58,000 for R$ 9.3 million out of the 750,000 CEPACs put up for sale. The 2014 economic crisis[8] explains partially why the first Água Branca auction failed.

8. Besides the fact that real estate developers had shown more interest in other city's areas where the cost of building rights was lower than the CEPAC unit value.

City Center Urban Operation (OUC)

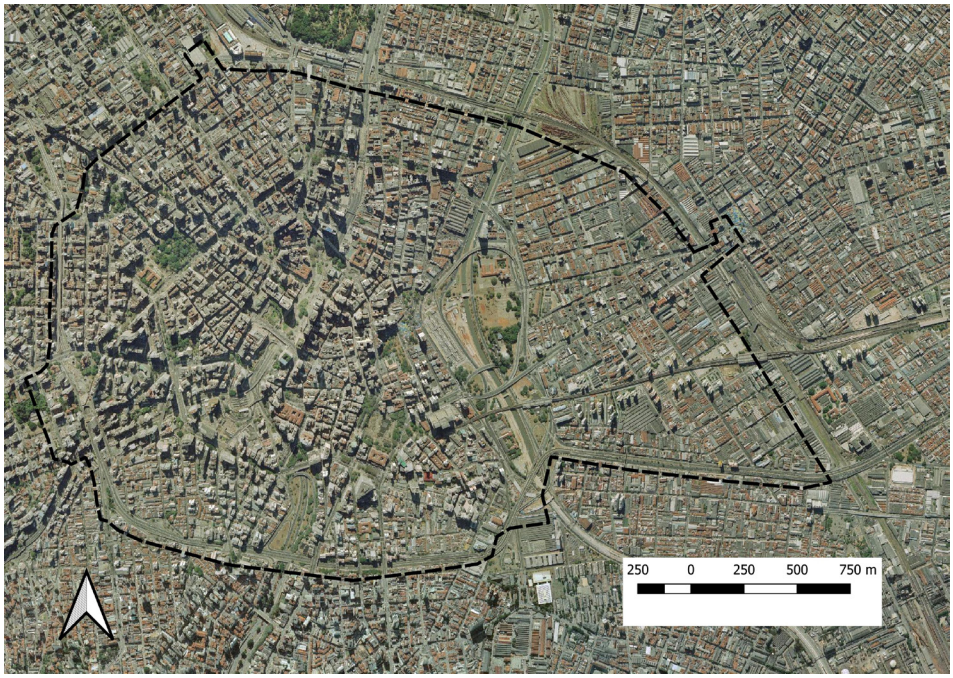
Municipal Law 12,349 (SÃO PAULO, 1997) established the City Center Urban Operation in 1997, embracing the so-called *Centro Velho* [Old Center] (Sé District) and *Centro Novo* [New Center] (República District). The operation also took over part of São Paulo historic districts such as Glicério, Brás, Bela Vista, Vila Buarque, and Santa Ifigênia – a 663-hectare area.

The operation's goals were promoting urban redevelopment by encouraging real estate investments in the Center through financial compensations. Firstly, an assessment investigated all the issues and weaknesses the area had gone through over time to define goals and outcomes. The law defined paramaters for urban redevelopment, regularization of informal real estate units, renovation and retrofiting of old buildings.

In addition, the operation also offered extra benefits to attract new residents, hotel chains, garage buildings, recreational and cultural centers. Finally, as a strategy, legislation allowed using the highest FAR in the city, up to 12 times the plot area.

The City Center also offered special conditions for transferring development rights of landmark properties. They could transfer 100% of the difference between the actual FAR and the FAR 12 with a FAR below 7.5; 60% of the FAR between 7.5 and 12; 40% of FAR between 12 and 15; and 20% of FAR when above 15.

Figure 2.4
Centro Urban Operation's perimeter
Source: Author's elaboration from Ortofoto (2001)[9].



9. Available at: http://geosampa.prefeitura.sp.gov.br/PaginasPublicas/_SBC.aspx#. Accessed on: July 13, 2018. Original scale: 1:25,000.

Despite all the incentives granted for the operation to succeed, only 23 proposals out of 134 passed over 22 years. Five of them were for buying building rights, five for buying the transfer of development rights, and 14 were exceptions for the regularization of informal properties. It may explain the low financial return it had, fundraising only R$ 33 million. Part of the funds raised was settled in:

- Public space rehabilitation projects – renovation of the *praças* Patriarca, Dom José Gaspar, Roosevelt, Sé and Parque Dom Pedro.

- Expropriation and remodeling works on Praça das Artes and Vila Itororó.

- Sampaio Moreira Tower restoration (the new Municipal Secretariat of Culture headquarters).

Água Espraiada Consortium Urban Operation (OUCAE)

Municipal Law 13,260/2001 created the Água Espraiada Urban Operation (SÃO PAULO, 2001) and Municipal Law 15,416/2011 (SÃO PAULO, 2011) revised it ten years later. Thus, Água Espraiada is the first urban operation passed after the 2001 City Statute, which transformed it into a "Consortium" to provide extensive use of the federal law benefits. Its main guideline was to revitalize the region's surroundings, delivering road system, public transport, social housing improvements, and public spaces for recreational uses.

The structural road project along Água Espraiada stream dates back to the 1960s. During the 1970s, the Department of Roads and Highways (DER) expropriated the area and began road works without finishing it, though. Numerous favelas sprawled along the stream

once the road works did not seem to finish off in a short-term period. In mid-1995, however, the city administration decided to complete the road works. For that, they have eradicated 28 of the 68 favelas sprouted over time and evicted approximately 20,000 people. Thus, such a policy supported enhancing further the area, which already had high-end commercial developments.

Municipal Law 13,260/2001 established the urban guidelines for the current Avenida Jornalista Roberto Marinho's influence area. It connects Avenida das Nações Unidas (Marginal Pinheiros) to Imigrantes Expressay (Rodovia dos Imigrantes), covering 1,373.32-hectare area. The main interventions provided were (SÃO PAULO, 2001):

- Extension of Avenida Jornalista Roberto Marinho to Rodovia dos Imigrantes (approximately 4.5 kilometers);

- Opening of side roads from Avenida Engenheiro Luís Carlos Berrini to Avenida Washington Luís.

- Construction of two bridges over the Pinheiros River, connecting Marginal Pinheiros to Avenida Jornalista Roberto Marinho.

- Construction of traffic underpasses at the main road intersections.

- Construction of pedestrian overpasses.

- Construction of 8,500 social housing units to shelter former favelas' residents.

The estimated value of the interventions at the time was R$ 1.1 billion. City Hall expected that the sale of CEPACs would afford most of the works. The initial projection was to issue 3.75 million CEPACs, reaching

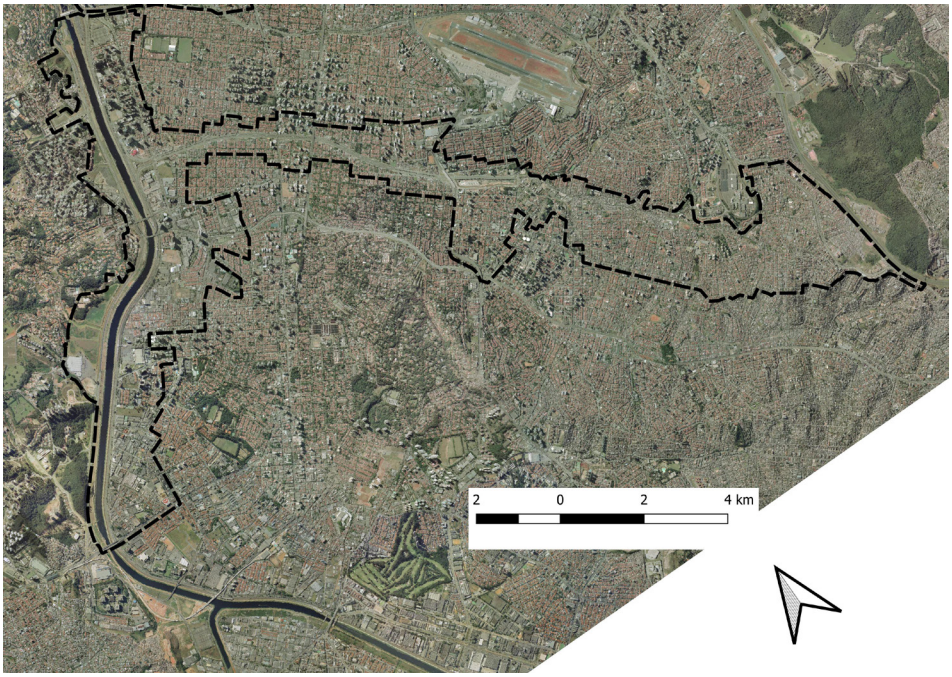


Figure 2.5
Água Espraiada's perimeter
Source: São Paulo (2001).

an additional building area of 4.85 million square meters at a minimum initial cost of R$ 300.00 for 15 years. CEPAC's minimum cost was set based on the highest value it could assume to keep the enterprise competitive in the market. The text of Municipal Law 15,416/2011, which aimed to review the urban operation, added another package of works to be financed with the new auctions:

- Opening of a two-side lane along the Água Espraiada stream, from -Lino de Moraes Leme Avenue to the surroundings of Leno Street, consisting of a parkway.

- Opening of a two-side lane from Eng. Luís Carlos Berrini to Washington Luís avenues, along the stretch of Av. Água Espraiada Avenue (currently known as Jornalista Roberto Marinho Av.).

- Construction of traffic underpasses at main intersections.;

- Construction of an underground expressway linking up the current Jornalista Roberto Marinho Av. to Imigrantes Expressway, from the surroundings of Pedro Bueno Av.

- Creation of a park between local roads, aiming at environmental protection.

- Extension of Dr. Chucri Zaidan Av. reaching Paz Street.

- Widening of several streets.

- Execution of a tunnel passing below José Guerra Street, in the stretch between Antônio das Chagas and Dr. Aramis Ataide streets

- Construction of a bridge between Morumbi and João Dias overpasses and its road connection to Dr. Chucri Zaidan Av.

The consortium urban operation in Água Espraiada region was the most remarkable market success story among all urban operations in São Paulo. From 2001 to 2019, it raised R$ 2.9 billion in CEPAC auctions, consuming 3.3 million square meters at a value of R$ 885 per square meter. Regarding expenditures, 37% were settled in road works (mostly for cars), 32% for land expropriation, 14% for social housing construction and 10% for public transport facilities.

ANALYSIS OF THE URBAN OPERATIONS' PERFORMANCE

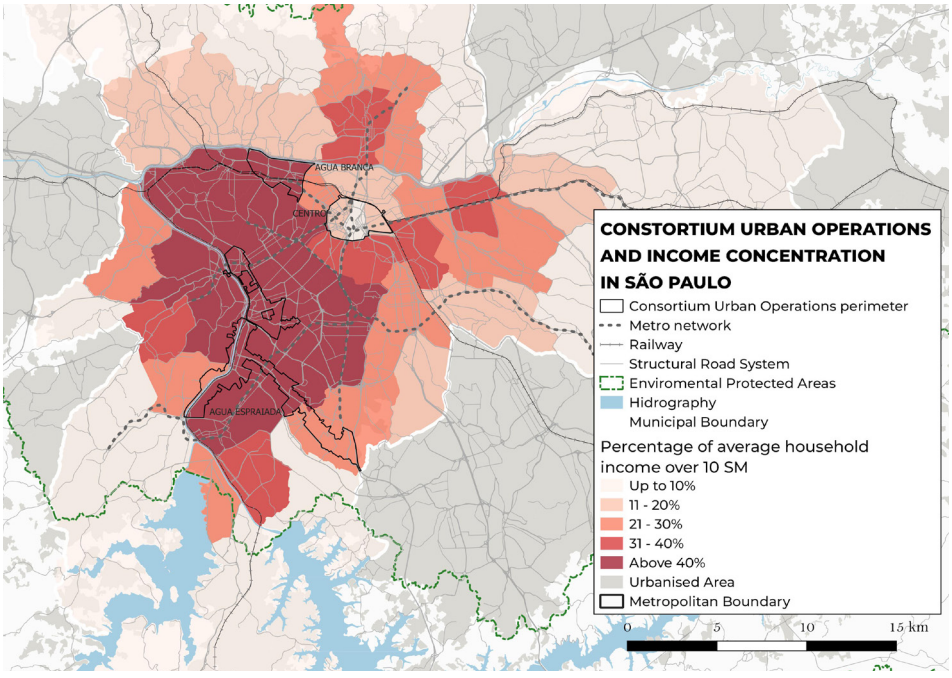
When analyzing the implementation of urban operations in São Paulo, most were carried out in areas that host the city's highest-income population, mainly within the Southwest Quadrant.

Figure 2.6 shows that out of the four urban operations in São Paulo still in force, three (Água Branca, Água Espraiada, and Faria Lima) were in neighborhoods where more than 40% of the households had an average income above ten minimum wages in 2010. Furthermore, it is worth noting that two of them (Água Espraiada and Faria Lima) are within the Southwest Quadrant. On the other hand, only the City Center Urban Operation took place in the Sé, República, and Brás districts, which had up to 20% of their households with this average income above ten minimum wages in 2010.

Therefore, the funds raised and reinvested concentrated in only two locations: Água Espraiada and Faria Lima, not coincidentally within the city's highest-income neighborhoods.

Figure 2.6
Urban Operations and high-income neighborhoods in São Paulo
Source: Author's elaboration based on IBGE data on District Digital Base[10].

10. Available at http://geosampa.prefeitura.sp.gov.br/PaginasPublicas/_SBC.aspx#. Accessed on July 13, 2018. Original scale: 1:5,000.



	Água Branca	Down-town	Água Espraiada	Faria Lima	TOTAL	%
INPUTS	**R$ 922.83**	**R$ 66.29**	**R$ 3,195.99**	**R$ 2,472.08**	**R$ 7,377.18**	**101%**
CEPAC Auction	-	-	R$ 2,891.28	R$ 1,313.10	R$ 4,204.38	57%
Additional Building Rights Grantt	R$ 544.90	R$ 33.44	-	R$ 465.32	R$ 1,043.66	14%
Net Income	R$ 377.06	R$ 36.19	R$ 1,013.18	R$ 581.29	R$ 2,007.72	27%
CEPAC – Private Placement	-	-	R$ 55.03	R$ 140.97	R$ 196.00	3%
Transfer of Development Rights	-	R$ 0.12	R$ 0.00	R$ 0.00	R$ 0.00	
Other Inputs	R$ 0.87	-	R$ 0.00	R$ 18.01	R$ 18.87	0%
Outputs	R$ 0.00	R$ 3.34	R$ 43.50	R$ 46.61	R$ 0.00	
PERCENTAGE	**13%**	**1%**	**53%**	**34%**	**100%**	

Table 2.1 **Resources obtained by type of inputs (R$ million** Source: Author's elaboration from SP Urbanismo data (2019)[11].

According to SP Urbanismo (responsible for managing urban operations), 87% of the R$ 7.4 billion collected came from the two most successful urban operations: 53% from Água Espraiada and 34% from Faria Lima.

Comparatively, as Água Branca collected 13% of the total funds raised, City Center raised only 1%. It highlights that the real estate market's interest will determine whether an urban operation will succeed. In other words, despite offering the most prominent exception to the maximum FAR among the other urban operations (reaching up to 12 times the lot area, as the previous section showed), the City Center was the only urban operation that collected the least amount of resources. Such data do not reflect the brand-new real estate's interest in investing in the area, though.

On the other hand, 57% of the total funds raised from the real estate market in current operations came from CEPACs, thus demonstrating to be an efficient fundraising tool. Furthermore, urban operations usually take place in regions that hold the most expensive high-rise building releases. Such regions represented 24% and 49% of the total residential and commercial buildings delivered in the entire city.

11. Data available at: https://www.prefeitura.sp.gov.br/cidade/secretarias/urbanismo/sp_urbanismo/operacoes_urbanas/index.php?p=19525. Accessed on 10 August, 2020.

Vila Andrade and Itaim stood out for sequentially concentrating 7% (residential) and 20% (commercial) releases, both districts located in Água Espraiada and Faria Lima urban operations. Nevertheless, as mentioned above, City Center (central districts such as Sé, República, and Brás) did not depict it as a meaningful urban fundraising operation.

The additional square meters acquired in all urban operations analyzed (6.3 million square meters) is approximately 22% of the high-rise residential projects launched within the related districts.

FINAL CONSIDERATIONS

Comparing the total raised by urban operations between 1995 and 2019 and the total raised through charging the Addition Building Rights Levy elsewhere since 2002, the first ones collected approximately two and a half times more for equivalent additional areas than the second. While the latter raised R$ 3.4 billion for additional 6.9 million square meters (at an average value of R$ 492 per square meter), urban operations collected R$ 7.4 billion for 6.3 million square meters (at an average value of R$ 1,174 per square meter).

So, the City Hall had R$ 7.4 billion to spend on only 3% of the city's urbanized area (the sum of all urban operations areas - 3,143 hectares) and R$ 3.4 billion to spend on the remaining 97%.

Thus, the city's administration had seventy times more resources for each square meter of an urban operation area than for each square meter in the rest of the city. It demonstrates the tremendous impact of concentrating resources territorially in the city's wealthiest areas,

strengthening socio-environmental disparities. Besides not fulfilling Strategic Master Plan guidelines, the tool proves to be built on extreme fiscal regressiveness.

Considering the investments done inside the urban operations, it stressed the exclusionary aspect of São Paulo planning in two aspects, as shown in the table below. First, by privileging the heavy civil construction sector and the car-motorized elite. For example, R$ 1.9 billion collected from urban operations was spent providing all road works such as overpasses, tunnels, and extensions of avenues, which corresponds to 26% of the total expenses.

The second aspect is transferring a great ammount of public resources to landowners through expropriation, accounting for no less than 25% of total expenditures. Then, the “vicious cycle” remains, once public authorities must spend more and more money on expropriations to carry out improvement works.

Public transport works, especially the Faria Lima Metro Station (Line 4 – Yellow), have led to gentrifying places originally rooted in popular shopping. At Largo da Batata, a large-scale urban renewal project removed intercity bus lines stops, taking commuting transit off and transforming the region into a more attractive to the real estate capital.

Finally, spending on social housing and public transport accounted for only 24% of the total investment in all urban operations. But, in Faria Lima’s and Água Espraiada’s experiences, the construction of new social housing units afterfavelas’ eradication did not happen the same pace as evictions occurred. As a result, more

OUTPUTS	Água Branca	Down-town	Água Espraiada	Faria Lima	TOTAL	%
Works & Services	R$ 235	R$ 26	R$ 1,409	R$ 941	R$ 2,611	43%
Land expropriation	R$ 14	R$ 4	R$ 1,194	R$ 319	R$ 1,532	24%
Social Housing	-	-	R$ 517	R$ 330	R$ 848	14%
Public Transport	-	-	R$ 390	R$ 200	R$ 590	10%
Overhead	R$ 40	R$ 4	R$ 217	R$ 108	R$ 369	7%
Other	-	-	R$ 36	R$ 11	R$ 46	1%
TOTAL	**R$ 289**	**R$ 35**	**R$ 3,763**	**R$ 1,909**	**R$ 5,995**	
PERCENTAGE	**5%**	**1%**	**63%**	**32%**	**100%**	

Table 2.2 **Urban Operations' expenditures split by type of work – R$ million**
Source: Eduardo Nobre's elaboration from SP Urbanismo data (2019).

than half of the poor original population became homeless since the number of housing units provided was lower than it must have been. Besides, increase in properties' value also made it difficult for low-income families to remain living in the surroundings.

In this respect, the works did not meet the community's interests, which preferred favelas upgrading rather than urban renewal (HIRATA, 2015). But, on the other hand, it must be said that the operation's works were coherent with the strategy put in practice to boost both public and private capital investments.

Thus, directly or indirectly, Consortium Urban Operations have increased socio-spatial segregation in São Paulo by eradication and promoting land value increase. So, consistently, more and more resources were transferred and captured by the landowners, as already mentioned. The lack of a broader social assistance program makes Consortium Urban Operations a planning tool that displaces the low-income population.

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The pitfalls behind redistributive Land Value Capture

FIFTEEN YEARS OF ADDITIONAL BUILDING RIGHTS LEVY IN SAO PAULO

Kaio Matheus Santos Nogueira

Abstract

Additional Building Rights Levy (Outorga Onerosa do Direito de Construir - OOCD, in Portuguese) is one of the main instruments for the redistribution of financial gains arising from the urbanisation process defined by the Brazilian 2001 City Statute. In São Paulo, the funds raised from OODC are the primary source of revenues of the Urban Development Fund (FUNDURB), expanding the municipality's capacity to invest in urban redevelopment projects. However, territorial features reveal that it is necessary to understand more thoroughly the benefits and obstacles that such an urban financing tool based exclusively on real estate activity, may present to cities trying to achieve the goals of the social function of the property.

Keywords

additional building rights levy, sao paulo, land value capture, urban planning instruments, city statute.

INTRODUCTION

The use of land-based planning instruments – so-called land value capture instruments – to finance urban policies became popular throughout the mid-20th century in several countries besides Brazil, such as Colombia, United States, Italy, France, United Kingdom, and Israel (SMOLKA, 2013; ALTHERMAN, 2012). Yet, despite each regional specificity, they directly or indirectly take into account the principle that public investments provide land value uplift that are individually appropriated by private landowners. As a result, landowners and developers end up passively enrichening when capturing the appreciation of their assets for which they have not contributed to. .

With this comes the idea that public authorities must rule forms of compensation for the use and occupation of urban land to avoid private gains to the detriment of the collective realm.

These instruments play a redistributive role as the funds collected from charging development rights are socialized in infrastructure works and urban improvements forms of investments. Thus, it becomes possible to balance public-private gains through a win-win relationship without burdening the public treasury.

The possible arrangements for applying such redistributive principles vary to a great extent. The nationalization of urban land in England and France (MCCLLISTER et al., 2018) and lease contracts in Singapore and Hong Kong (HUI; HO; HO, 2004) are examples. Still, the Brazilian case is relevant due to the land ownership legal arrangement that allow these instruments to be put in practice, which works by separating the right to build from the land ownership, making the the former a collective good.

In Brazil, the creation of *Solo Criado* (Created Developable Land), greatly influenced by Chicago's 1970s experience, was the legal basis for establishing financing instruments aimed at urban development. In the following decades, such tools were addressed as a discursive agenda by the Urban Reform movement. In addition, the agenda defended tackling territorial inequality issues by making public investments in infrastructure and housing in impoverished areas. The City Statute, years later, has institutionalized such premisses.

Despite Brazil being a relevant case in both the Latin American and the international scenario, as Smolka (2013) points out, practical experiences in using land-based instruments are still scarce among Brazilian municipalities. Only a few out of the largest cities, such as São Paulo, Curitiba, Porto Alegre, and São Bernardo do Campo, institutionalized land value capture mechanisms within their urban development policies (SANTOS JR; MONTANDON, 2011).

There is an opportunity to investigate what are the barriers to applying those. Studies have already shown some of the blockages involved. They point towards the institutional and technical capacity of local governments (NOGUEIRA, 2019), disparities in real estate market dynamics between cities (MASSARI, 2020; ZAMBONI et al., 2019), and questioning the effectiveness of such tools for small and medium-sized towns (BRAJATO; DENALDI, 2019).

Nevertheless, the focus of this chapter is to bring empirical evidence regarding the application of the Additional Building Rights Levy in São Paulo. The application grew in proportion after the review of the city's Master Plan in 2002 and 2014. Currently, the OODC is included within the central structure of the city's urban policy. And its discursive justification is no longer questioned as it had been in the past.

The inclusion of OODC within the city's Strategic Master Plan in 2002 (and its the review process in 2014) poses a new scenario for investigation in wich there are enough qualitative analytical resources and volume of data that allow for the reframing of novel research questions, in a moment where urban studies in Brazil start to focus on the assessment of the effective application of the City's Statute instruments.

The following sections briefly present both the national and the São Paulo experiences in implementing OODC over time. Then, we show the British case and explore the differences between the two experiences. Next, we bring quantitative results of the charges on development rights in the city and compare it to the residential real estate activity witnessed during the same period between 2002 and 2014.

INTRODUCING ADDITIONAL BUILDING RIGHTS LEVY AS AN URBAN PLANNING TOOL IN BRAZIL

OODC is one of the instruments for financing urban development established by the 2001 City Statute. The tool works through the selling of additional development right permits, measured in terms of the difference between the lot's basic and maximum Floor Area Ratio (FAR) coefficient, defined both by the Master Plan and the Land Use Regulation.

The instrument originates from the *Solo Criado* legal concept developed in the 1970s, which considers that land is created when an area larger than the lot size is built (CEPAM, 1976). The creation of developable land leads to densification, which consequently requires the supply of more infrastructure networks, such as water

and sewage systems, road paving, public services, among others. Inasmuch as public resources finance most of the infrastructure costs, the *Solo Criado* (which separates the right to build from the land ownership) is a form to share infrastructure costs with private landowners. So, part of the appreciation, generated either by the physical intervention or by the planning regulation on land, is collected by municipal authorities and help to cover urbanization costs (BASSUL, 2010; CYMBALISTA; SANTORO, 2006; NOGUEIRA, 2019).

The introduction of *Solo Criado* in Brazil had the influence of the expertise of national and international urban practitioners. On one hand. the French School of Sociology and Marxist urbanism had influenced brazilian academicians and practitioners profoundly. One the other, practical international experiences had created a set of thought-out urban instruments also aiming at capturing from developers a contribution to invest in urban infrastructure and to preserve heritage sites. In particular, the exchange of experiences between Paris and Chicago must be highlighted as one of the main references in conceptualizing Solo Criado (NOBRE, 2019).

This particular perspective to look at cities, addresses space as a social construct, upon which social structures coexist and reproduce. Therefore, the inequality pattern of the capitalist system bears the same conflicting relations conceived within the factories, thus becoming a social issue to be faced in the same proportion. This ideology has gained grounds at the same time as effects of the country's late industrialization sarted to be seen through the São Paulo's metropolitan sprawl (MARICATO, 1996) and when social and union movements became an organized force.

The association between intellectuals, practitioners and social movements has established commons-based urban thinking in Brazil over the last six decades. The consolidation of the National Urban Reform Movement (MNRU, Portuguese: *Movimento Nacional por Reforma Urbana*) agenda is a timeframe remark. MNRU has discussed and created alternatives for housing issues in urban centers and promoted redistributive policies focused on reducing territorial inequalities and their development patterns (RIBEIRO; CARDOSO, 1996).

As seen before, the City Statute's Article 28 ruled the OODC as a planning tool to induce Urban Development. Moreover, it marked the normative consolidation of the National Movement for Urban Reform's guidelines. It demanded that master plans define a maximum building limit according to land use capacity and allowed municipalities to delimitate a free basic FAR limit. The levy must then be applied to the difference between the maximum and basic limits. Unlike *Solo Criado*, the Onerous Grant is not necessarily related to the unitary FAR (i. e., municipalities are allowed to set a basic free-of-cost building right permit that it is higher than the lot size).

Even before the OODC being ruled by the City Statute in 2001, there had already been discussions to apply similar tools in São Paulo ten years earlier. More specifically, during the 1991 Master Plan proposal under Luiza Erundina (PT)'s administration. At that time, Luiza Erundina's Master Plan was the output of a broad discussion involving many sectors of society, including the widespread participation of social movements unprecedently (BONDUKI; ROSSETO, 2019). The debate on using this instrument implied delimitating a single and unitary basic citywide FAR. Despite efforts to bring it off, Erundina's Master Plan proposal did not get approved

due to the challenges involving drafting a law that could embrace all the interests at stake (CYMBALISTA; SANTORO, 2006).

Eleven years later, the 2002 Strategic Master Plan review process proposed defining a single and basic FAR and stablishing the financial charges to every developer that exceeded it. The draft bill underwent changes by the City Council proceedings, though. As a result, it altered the instrument's guidelines even before getting approved (BONDUKI, 2007; CYMBALISTA; SANTORO, 2006). One of the reasons was the pressure from the civil construction sector and the City Hall Finance Secretariat. If changes were not made, the latter feared to have Urban Property & Land Taxes (IPTU, Portuguese: *Imposto Predial e Territorial Urbano*) collection decreased.

Changing the basic free-of-costs FAR limit was one of the alterations. It would be no longer unitary and could vary between 1.0 and 2.0 depending on the zone. In addition, the reduction of the maximum limits can be mentioned (which became 2.5 for most of the municipality, reaching 4.0 only in some specific areas). Moreover, a transition rule to adjust coefficients, which gradually reduced the basic FAR during the plan's first three years[1]. The new regulation also kept the so called Adiron Formula[2], a calculation ratio allowed to increase free FAR in projects that, in contrast, decreased the occupancy rate (NOBRE, 2015) as a way to incentivise permeable areas within the lot. Such changes were incorporated into Municipal Law 13,430/2002 (that is, 2002 SMP).

The revision proposal in 2014 was passed and ruled by Municipal Law 16,050/2014, currently in force. The new plan's main guideline is to promote and manage densification towards strategic axes and public transport infrastructure networks' surroundings. Then, the law

1. See article 296 of Law N° 13,430/2002.

2. Pursuant to articles 166 and 297 of Law N° 13,430/2002

defines higher, maximum FAR in regions surrounded by rapid transit, reaching a FAR equal to 4 for this case. In contrast, the maximum allowed is twice the land area in so-called backwater areas outside such axes.

The 2014 SMP finally approved the single and unitary basic FAR at a city level. Then, any building that exceeded the city's basic floor area ratio must pay OODC. Authors argue that a single FAR makes sure that every property will have the right to be equal with its economic use. Thus, reducing the impact of the free basic FAR in defining land prices, since all properties hold the same basic development right allowance (RABELLO, 2012). Besides, the plan also limits minimum areas for residential units to be built along the mentioned axes; restricts the creation of new parking lots; and encourages integrations between building and public space through mechanisms such as public fruition and the active façade (SÃO PAULO, 2014; CORRENTE, 2019).

The new law adjusts the previous formula to relieve the amount paid per square meter in financial compensation as more significant building potential is used. It refers to an initiative to encourage building activities within and towards the incentivized urban axes and revise the basis for calculating the counterpart's charges. For a long time, the counterpart price had not followed the actual increase in market prices. The social and planning factors that provided refunds or licenses to the counterpart depending on the building's use and location, respectively, were maintained.

Unlike the first urban policy experience in São Paulo, the 2014 SMP addressed a territorial strategy for levy payments (BRAJATO; DENALDI, 2019). Thus, it is an intermediary element between policy and practice, considering the plan's transformation of urban space. It is implemented acknowledging different territorial contexts but guided by the central strategy of densifying the most traditional, consolidated areas in town.

In this chapter, we asses, using empirical evidences, the degree to which such policies on land value capture demonstrate concrete effectiveness, their limits, and also obstacles. Before that, however, in the next session, we make a brief characterization of the United Kingdom's experience, emphasizing on the three main application strategies that have been implemented since the 20th century.

Table 3.1
Additional Development Rights Levy application formula according to the 2014 SMP
Source: Author's elaboration from São Paulo (2002; 2014).

	2002 SMP (Law 13,430/2002)	**2014 SMP (Law 16,050/2014)**
Additional area multiplication factor for the calculation of due levy	$\frac{Vt}{\text{FAR}bas} \times Fp \times Fs$	$\frac{At}{Ac} \times V \times Fp \times Fs$
	Vt: the value of m² of land fixed in the Generic Value Plant	At: land area in m²
	FARbas: Basic Floor Area Ratio	Ac: total computable built area intended in the project in m²
	Fp: planning factor, between 0.5 and 1.4	Fp: planning factor, between 0.5 and 1.3
	Fs: social interest factor, between 0 e 1.0.	Fs: social interest factor, between 0 e 1.0.

BETWEEN DIVERGENCES AND CONVERGENCES ON THE BRITISH EXPERIENCE

São Paulo's experience in charging OODC and carrying out Urban Operations puts the mentioned city on the record of advanced global urban development for finance policy development best practices. Moreover, both have been legitimatized because of their ideological role in redistributing wealth and their application supported by objective economic models, especially given the normative evolution of the Urban Reform agenda.

The British case is possibly the oldest test laboratory for land gains recovery globally (ALTERMAN, 2012). Moreover, the British experience matters due to its role in exporting such practices to its colonies. Thus, such tools have been adapted to each place over time throughout the world.

The political and economic transformations the UK underwent during the reconstruction of British cities after World War II dictate, to a great extant, the reasons behind the implementation of such mechanisms in that country. The Town and Country Planning Act, passed in 1947, gave Parliament greater control over how the UK would rebuild itself and public services and infrastructure were to be delivered (CROOK; HENNEBERRY; WHITEHEAD, 2015). The main legal change was the nationalization of the right to build throughout the national territory, detaching it from the land ownership rights. Thus, the approval of any new building development became subject to the central government's approval.

As strategies for redistributing wealth were designed to rebuild the country's economy, charging new developments in tax return came up to be a fair-minded model for redistributing urbanization costs. The primary justification was the need for community sharing of

land gains promoted by the action of the State and, consequently, funding expenses on infrastructure provision (CROOK et al., 2015).

In the Post-War period, three experiences were applied as a fixed rate to be charged from the overall development value. In all of them, the planning authorities would tax development projects of any type and location indiscriminately. In some cases, the charge could reach a proportion of 100% of the global value.

All of these experiments were implemented by Labor governments and as a result, there was a prompt reduction in land supply as landowners withdrew their lots from the market in retaliation for charges. Such strategies would last until a conservative government took power and revoked the tax application. Therefore, few resources were returned to the public power compared to the previous experiences (CROOK; WHITEHEAD, 2019). Catney and Henneberry (2019) describe it as the corporatism era of Land Value Capture (LVC) in the UK as private agents and the government negotiated charges to mitigate financial disadvantages.

The British liberal reform in the 1980s indisputably influenced its territorial planning restructuring. The massive privatization of several public infrastructures, social housing, and urban services-providers companies accompanied fiscal and tax policy changes. Consequently, it emerged a scenario of greater autonomy of the Local Planning Authorities (LPA), which are responsible for spatial planning and its financial policy. Then, LPAs gained greater independence over approving development applications and becoming accountable for local-impact activities planning approval. Besides, LPAs also started negotiating compensatory measures as demand for infrastructure increased, through the use of policy mechanisms known as Planning Obligations (POs) (Catney and Henneberry, 2015; Crook, 2015).

POs are also negotiated on a case-by-case basis. Legally speaking, POs are a contract entered into between the LPAs and the private developer. It is an attached conditional part of application. Payments can be provided in financial or in-kind provision—for example, the delivery of social housing units built on the same site as the project development. The offset could also provide some equipment to the public, such as finishing expanding works of a school in the neighborhood.

The negotiation autonomy of LPAs played a central role in financing urban policies. On one hand, private agents were willing to negotiate with larger contributions to defer their projects, considering an optimistic scenario for more profitable real estate investments. On the other hand, the decreased resources from the central government created the ideal system in which almost no planning permission would be refused. As a result, the payoffs grew higher and more profitable.

Catney and Henneberry (2015) call post-1980 as the "neoliberal model era." That was when local governments gradually began to stick to the market's financial and accounting practices, appropriating feasibility, profitability, and cost-effectiveness concepts into the public administration. In this sense, the British planning system (especially in England) and the planners' practices launched incorporating business routines, viability calculations, and contribution negotiation.

In the Local Development Plan (PLD), the bidder supports the request for approval, and the LPA justifies its authorization or not. Unlike the zoning system (where the land use and occupation parameters are universally assigned a priori for the entire municipality), the British system follows a discretionary standard. The parameters are granted based on the objectives pointed out in each

PLD. Such aspect provides LPAs “superpowers” (CROOK, 2015) over land use regulation, based on agreements with subjective criteria rather than a transparent control of which content is approved or not.

In the 1990 Town and Country Planning Act revision, POs were ruled by Section 106 (S106) in response to accusations that they were being used as bargaining instruments for capturing extra benefits. Also, POs were ruled given the understanding that S106’s resources should prioritize investments in social housing and public equipment, not for infrastructure expansion demanded by the appreciation caused by a new venture.

In 2010, the British government approved the Community Infrastructure Levy (CIL). The instrument is supplementary to S106, not excluding its application. However, it is substantially different in terms of application forms and procedures.

First, it is up to each local authority to decide whether to apply the CIL and to define its calculation basis. The local authority defines the price to be charged for the levy based on a price list per square meter, considering the type of land and its location. The cost is calculated by multiplying the project land area by the unit price of the fee for that particular use. Social housing developments, for example, are exempt from charges. Second, the LPA must prepare a spending plan for the resources collected through the CIL. They can only be used to finance local and sub-regional infrastructure. Such attributes make CIL look-alike the OODC’s experience in Brazil.

The CIL was celebrated among developers and private agents its predictability and assertiveness. Moreover, it helped reducing uncertainties within the projects’ economic viability since the value calculation is unique

and payments made a priori. Differently, this does not happen with the S106 guidelines. On the other hand, studies have shown that, for the latter reason, CIL PUT smaller developers in disadvantage, as they hold lower investment capital turnover (MCALLISTER; SHEPHERD; WYATT, 2018; COLEMAN; CROSBY; MCALLISTER; WYATT, 2013). That is, they have less capacity to commit financially in the initial periods of the investment. Other studies also evaluated how the application of CIL is spatially inconsistent. Their findings prove they are more effective in larger cities and the wealthiest regions, with more outstanding institutional infrastructure and a robust real estate market, making the instrument more widely used in London and the southeast part of England (DUNNING; FERRARI; WATKINS, 2016).

In short, land value capture policies in the UK have gone through three main phases. The first phase of indiscriminate taxation of projects, with intense opposition from sectors of the urban economy, especially landowners. A second phase is represented by negotiating financial or physical counterparts between LPA and developers as POs (still widely used today despite criticism for its discretionary structure and little transparency). And the third and most recent phase is introducing an urban planning instrument that promotes greater predictability and clarity to the application of LVC. However, its downside is raising discussions about the effectiveness in smaller locations with more negligible real estate dynamics.

The British experience shows a continuous adjustment of the land rent recovery/redistribution policy in line with the country's neoliberal transformation since the 1980s. This transformation, which is still in force, is mainly represented by the departure from the role of the central government as local autonomy is increased, especially in

financing policy. In addition, the constant introduction of private market practices into public administration routines, justified by "efficiency" and "meritocracy" narratives, greatly intensifies regional disparities.

METHODS

Methods used to evaluate the OODC application in São Paulo corresponds to a 16 years' timeframe between January 2004 and December 2019. Therefore, it covers the entire legality of the 2002 Master Plan and the partial results evidenced by the 2014 Master Plan during its first five years.

The data collected from development rights payments are available through São Paulo's transparency system and were acquired from the Monitoring and Evaluation of the Implementation of the Strategic Master Plan Portal[3] and the GeoSampa Portal[4]. Data from the Master Plan Monitoring portal provides the annual inflows of funds from OODC payments. Data extracted from the GeoSampa portal offers complete information for each additional development right purchase request. Namely: the total area acquired; the price paid by the interested party (total and per square meter); development site; basic FAR; project final FAR; planning and social discount factors used in the formula; lot zoning; and the predominant land use category.

We stipulated the year when building right was bought as being the same year when Building Permit was issued. Additionally, we assumed that Building Permit is issued conditioned to the payment of the total amount on OODC charges, even if it has been bought with installments. Therefore, the data collection sums from

3. Available at: https://monitoramentopde.gestaourbana.prefeitura.sp.gov.br/. Accessed on June 30, 2019.

4. Available at: http://geosampa.prefeitura.sp.gov.br/PaginasPublicas/_SBC.aspx. Accessed on June 30, 2019..

the SMP Monitoring portal were kept at nominal values. In turn, prices displayed by the GeoSampa base were updated regarding the General Price Index – Internal Availability (IGP-DI) (December 2018).

The preliminary data survey provided by São Paulo's transparency system shows an increase in the uptake of development rights from 2007 onwards and the resulting significant increase in amounts of OODC funds as of 2009. This growth reflects the condition of the wide real estate market activity from 2009 until 2013, peaking up in 2010.

Hence, we present findings on the consumption considering building rights acquisition patterns, the changes in the most recent residential real estate production scenario, and the Master Plan (2014) and Zoning Law (2016) revision after the real estate boom period. We also present the concentration and spatial dispersion patterns of the Onerous Grant territorial collection and the effects of the discount factors used in the instrument's formula. We concentrate analysis using descriptive statistics considering a qualitative framework of the subject's State of the art and the changes in the city's political economy. Therefore, we do not intend to go further in quantitative methods that would explain the causal relationships.

CHARGING OODC WITHIN THE 2002 AND 2014 MASTER PLANS

For the sixteen years of data available, São Paulo granted 7,604,758.20 square meters of additional building rights, summing up R$ 4,288,332,209.22 (in real prices for Dec/2019). This sum corresponds to the levy collection related to both the 2002 Plan (Law 13,430/2002) between 2002 and 2014; and the 2014 SMP (Law 16,050/2014) between 2014 and 2019[5].

5. Although the master plans foresee charging an onerous grant, it was only in the promulgation of the revision of the Land Use and Occupation Laws (LPUOS) in 2004 and 2016 that this instrument was fully regulated. Thus, it began to be effectively used in 2004 and later in 2016. It was at both times when the new parameters for the lot occupation came into effect.

Initially, we classified data into three sub-periods (2004-2008, 2009-2013, and 2014-2019) to provide an analytical framework that captures the respective national macroeconomic scenarios. Especially considering the effects on the civil construction sector provoked by the *Minha Casa Minha Vida* Program (MCMV) in 2009. As well reported by the literature, this program significantly restructured Brazil's residential industry scenario (ROLNIK, 2015). Next, we periodized data considering the 2002 e 2014 Master Plans' timeframe (2004-2013; 2014-2019) to build a comparative analysis between them.

The evolution of payments and acquired building rights (Figure 3.2) follow similar behaviors from the 2009 real-estate bubble onwards (MIOTO; CASTRO; SIGOLO, 2019). Before that, however, building rights sales 2004 and 2008 was not necessarily followed by an increase in OODC revenues collection proportionally.

The main reason for the imbalance in the amount of development rights granted and the revenues collected was the outdated prices described in the General Land Values Plant (PGV, Portuguese: *Planta Genérica de Valores*) of São Paulo. They had not been corrected since 1986, although they continued to be considered for calculating the due contribution. However, it was only in 2009 when these values were finally updated by the law 15,044/2009. It was at this time that a rapid increase in revenue was observed between 2009 and 2010. For the first 10 years of application, OODC charges used to be calculated based on a 2-decade outdated land value baseline, which helped not meeting the instrument's original goals.

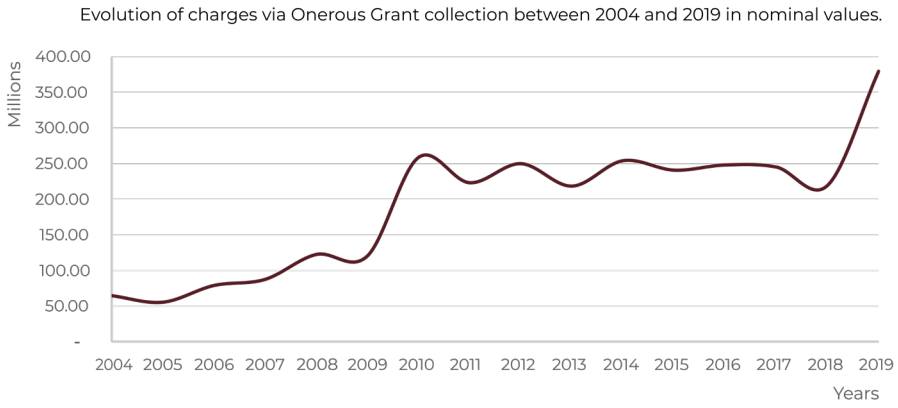

Chart 3.1
Evolution of charges via Onerous Grant collection between 2004 and 2019 in nominal values
Source: Author's elaboration from Monitoring Portal from 2014 Plan Monitoring Portal.

After 2010, revenues inflows and development rights sales decreased despite real estate market expansion between 2000-2005. Building rights stocks depletion stipulated for each district in São Paulo partially explains how it gradually declined. Some studies (NOGUEIRA, 2019; LEITE, 2019) show that the decline was concentrated in the most-desired districts quickly depleted building stocks. In other neighborhoods, the sale of building permits did not even reach 10% of the initial total, highlighting the preference of formal housing industry to particular parts of the city.

The third and last period (2014 onwards) comprised the best moment in terms of OODC revenues collection. During this time, the real estate market was trying to recover itself after the economic downturn faced years earlier. Still, it has been the transition between the old and the new urban regulation framework that has brought the densification corridors in São Paulo were instituted. As a result, the two curves showed a slight decrease in behavior slower than in the previous period but rising exponentially in 2019.

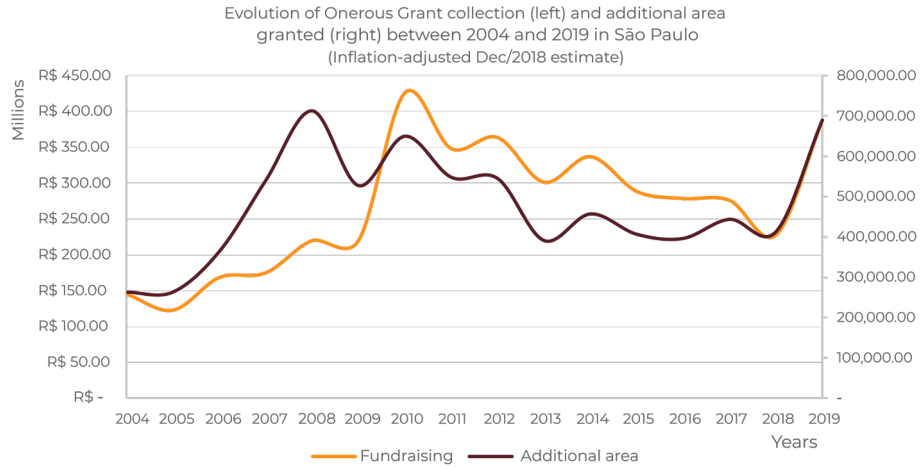

Chart 3.2
Evolution of Onerous Grant collection (left) and additional area granted (right) between 2004 and 2019 in São Paulo
Source: Author's elaboration from Monitoring Portal from 2014 Plan Monitoring Portal.

The 2014-Master Plan-related revenues corresponded to 53% of the total paid in OODC charges (about R$ 950 million), and 61% of the total additional building rights sold (just over 1.7 million square meters), following an upturn behavior in as much as the volume of residential new built increases

Chart 3.3 shows the practical effect of the legal mechanism known as Protocol Rights to effectively apply urban planning instruments in the city's new plan.The mechanism allows new planning permission applications using parameters in force at the time of the submission to maintain these parameters even after a new regulation comes into action. Technically, it means that developers could have their projects approved using more permissive parameters of the previous law, despite the approval of PDE 2014's brand-new parameters. Thus, the Protocol Right might have represented a limitation for the total effectiveness of the 2014 Plan in its first five years.

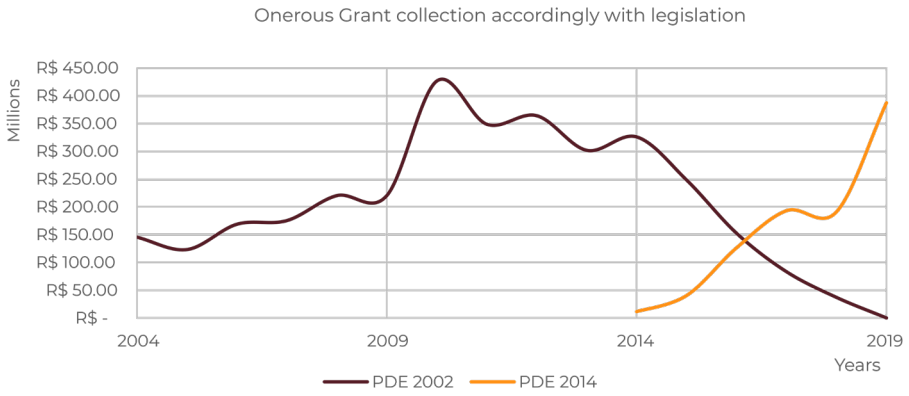

Chart 3.3
Onerous Grant collection accordingly with legislation
Source: Author's elaboration from Monitoring Portal from Geosampa.

The distribution of development rights sales is represented by the estimated average FAR coefficients (Figure 3.4). It clearly illustrates one of the main practical changes in the real estate market's behavior caused by changes in the 2014-Plan. In 2002, 60% of the projects acquired additional potential construction between 2.1 and 3.0 equivalent FAR (Table 3.1). On the other hand, 67% of the new developments presented coefficient varying between 3.1 and 4.0 under 2014's new legislation. The strategy of inducing larger real estate development within densification corridors is effective since most recent developments permit is issued in these areas.

Under the 2002 SMP, about 26% of the additional building rights granted was earmarked for projects presenting a FAR coefficient between 3.1 and 4. However, limit areas with a FAR equal to 4.0 were scarce in the city. They were distributed in specific zones (only ZM-3b and ZCP-b reached this limit for construction use). As a result, this range fluctuated dynamically less between 2004 and 2014. Still, it grows back when the 2014 new plan is approved, peaking up in 2019.

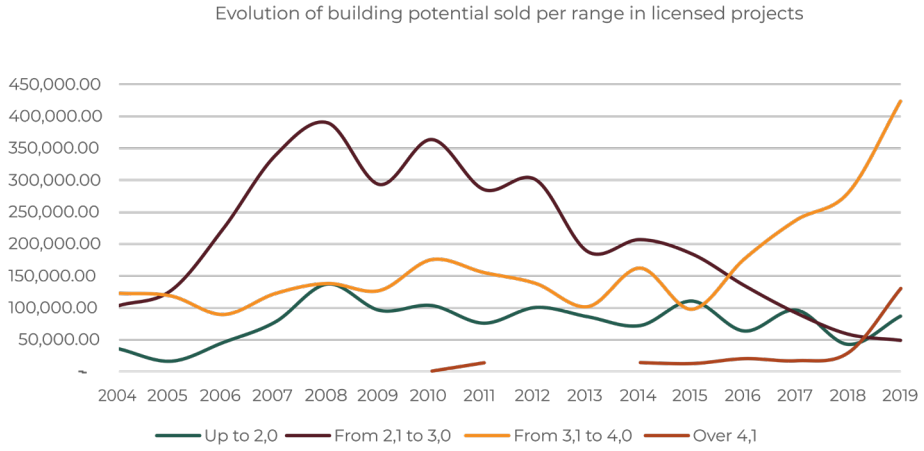

Chart 3.4 **Evolution of building potential sold per range in licensed projects**
Source: Author's elaboration from Monitoring Portal from Geosampa.

Therefore, the distribution of additional building rights in the macro-areas defined by the 2014 SMP and the 2016 Zoning Ordinance may be one of the main drivers of real estate activity in São Paulo. Despite densification corridor areas could change the design of land subdivisions, it would not cause significant alterations to the traditional spatiality of real estate activity as described below..

Table 3.1 **Additional and median land area of developments bought from construction potential in São Paulo per range of additional construction potential**
Source: Author's elaboration from Monitoring Portal from Geosampa.

	Additional area purchased		Median Land Area (m²)	
Construction Potential	**2002**	**2014**	**2002**	**2014**
Up to 2.0	17%	5%	1,428.80	450.00
From 2.1 to 3.0	**55%**	6%	**2,270.98**	588.10
From 3.1 to 4.0	26%	**67%**	1,657.26	**1,681.02**
Over 4,1	1%	12%	1,964.73	1,736.22

The median lot size registers the impact of the change in legislation and the adoption of densification corridors in the city's land residential market[6]. Overall, new developments' lot size drastically reduced from one SMP to another. Considering the proportion of additional building rights acquired in the most used range (FAR between 2.1 and 3.0), the median land area reached approximately 2,270 m2 in 2002. However, in 2014, it decreased to 1,681 m2, in the range between 3.1 to 4. In other words, most projects grew their building rights potential despite reducing their lot area, thus, becoming denser.

This represents evidence about the territorial effects of the 2014 SMP's densification strategy concentrated in the induced areas. It suggests that the negotiation and acquisition of land in these areas is probably conditioned to lengthy and costly procedures that prescribe conditions to accessing well-located areas. Densifying areas near rapid transit may also increase land and housing prices, given the territorial inequalities that still feature São Paulo's urban structure.

Table 3.2 presents the discrimination of the funds raised from charging construction between 2014-2019. They express almost 53% of the total amount and 61% of the additional building rights sold. Although it constitutes half of the SMP's timeframe validity (2014-2023), the impact of the Protocol Right as a limiting factor for its full effectiveness is evident. Almost half of the resources collected via OODC took place under parameters no longer used in the current municipal urban policy.

6. The median choice cancels out the effects of projects with a large land area but consuming little constructive potential in the average land area value. Therefore, it brings a more realistic representation of the changes that have taken place.

Table 3.2
Fundraising via charging Onerous Grant accordingly with 2002's and 2014's legislations
Source: Author's elaboration from Monitoring Portal from Geosampa.

Year	Fundraising (R$)		Additional Areal (m²)	
2002	846,297,633.41	47.13%	1,099,932.86	39.22%
2014	949,500,587.62	52.87%	1,704,332.05	60.78%
Total	**1.795.798.221,03**		**2,804,264.91**	

Still, within the 53% of the total of funds collected under 2014's SMP, 74% (R$ 706 million) came from charging OODC in areas with priority for densification (EETU, ZEM, ZEMP, ZEU, and ZEUP) (Figure 3.5). Even though 2014's SMP had addressed prioritized corridors in the whole city, data show that only a few out of these areas were, in fact, enhanced by new ventures. Showing that, such areas have been the most-envisioned territories for real estate activities.

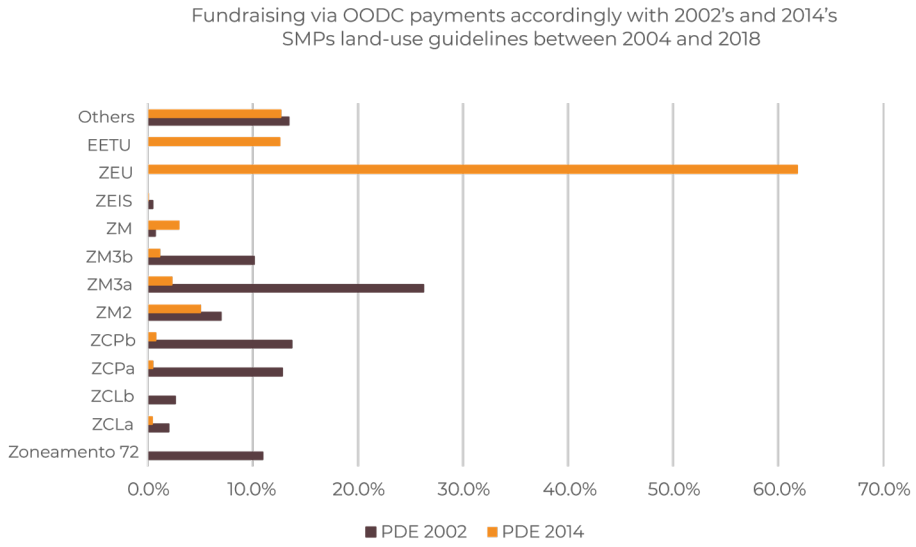

Chart 3.5
Fundraising via OODC payments accordingly with 2002's and 2014's SMPs land-use guidelines between 2004 and 2018
Source: Author's elaboration from Monitoring Portal from Geosampa.

Charges via OODC between 2014 and 2019 correspond across 73% of the collection and 56% of the additional building rights negotiated in West and South São Paulo (Table 3.3). It is worth remembering the West and South constitute the Southwest Quadrant (VILLAÇA, 1998). A region concentrating most of the public rapid transit hubs, higher-paid jobs, and housing aimed at the middle and upper classes in the city.

Thus, the data analyzed here challenge the premise that inducing densification would be worth enough to attract real estate dynamics. In fact, after the boom period, the real estate market patterns returned to the traditional and higher-income areas. It is worth adding here the temporal stimulus provided by 2016's zoning regulation. For three years, it allowed: (i) the construction of housing units in the areas near rapid transit axes and fewer units with a larger floor area ratio, thus approaching the average standard model; and (ii) one parking lot for every 60 m² of usable area. Given the fact of being a non-extendable article, it may have driven a rush among real estate developers willing to build within the city's most noble areas (EETU and ZEU), such as neighborhoods crossed by Av. Rebouças.

Table 3.3
The territorial distribution of raises funded via charging Onerous Grant accordingly with the 2014 SMP by São Paulo's regions
Source: Author's elaboration from Monitoring Portal from Geosampa.

Region	Total collected (R$)		Additional area (m²)	
CENTER	71,149,990.63	7.49%	98,581.19	5.78%
EAST 1	101,702,037.03	10.71%	315,167.13	18.49%
EAST 2	2,303,306.59	0.24%	60,924.15	3.57%
NORTH 1	17,797,995.26	1.87%	48,453.48	2.84%
NORTH 2	4,757,524.99	0.50%	53,962.93	3.17%
WEST	413,494,442.95	43.55%	551,444.28	32.36%
SOUTH 1	282,365,668.98	29.74%	404,676.58	23.74%
SOUTH 2	55,929,621.19	5.89%	171,122.31	10.04%
Total	**949,500,587.62**		**1,704,332.05**	

The new OODC formula provided by the 2014 SMP was designed to support densification corridors, as seen before. In this formula, the project's FAR coefficient is applied as the only denominator. Thus, proportionally, as a project consumes a greater construction potential, the unit price per square meter to be charged in OODC charges for that same land becomes cheaper. Technically, if we consider the following hypothesis: two lots that cost the same in the market value (one with a maximum use equal to 2.0 and the other with a 4.0 maximum index), the developer who decides to carry out a project in the latter will pay the unitary cost of OODC 50% cheaper than what would be paid by the former. To the extent that the projects can achieve greater use within the axes, the formula would theoretically act as one more inductor of market activity in such city regions.

Finally, the 2014 SMP applies a Planning Factor (Fp) to induce or restrain development activity where densification is intentioned or avoided, respectively. Under current legislation, the Fp varies between 0.3 and 1.2 for residential uses and from 0.0 to 1.3 for non-residential uses, depending on the property's macro-area. It means that for residential developments, the price paid as an Onerous Grant may be discounted by up to 70% or be increased by up to 20%, depending on their location.

TabLe 3.4
Calculation of the discount and the increase in the Onerous Grant collection in São Paulo considering the last two master plans.
Source: Geosampa data.

	2002		2014	
Discount	R$ 1,000,438,110.86	30%	R$ 406,824,454.15	43%
Bonus	R$ 131,553,897.77	4%	R$ 44,728,745.04	5%

We calculated that during the 2002 SMP, just over R$ 1 billion in OODC payments were not collected due to discounts. It represents 30% of all fundraisings carried out under previous law's parameters. In contrast, the over-collection equaled 4% of the total raised – around R$ 130 million. Yet, under the 2014 SMP legislature, the amount suppressed (by the end of 2019) was equal to R$ 406.8 million, representing 43% of the funds raised. The overhead was 5%, and almost R$ 44 million was additional collected. Relatively, changes in legislation led more than 40% in granting discounts and 25% more in surcharging on contributions.

The differences in the overburden values compared to the increase in discounts may indicate that the market converged housing production in some priority areas. Logically, real estate produces housing where legislation provides incentives. But to what extent is it possible to say that market activity was driven exclusively (or even primarily) by urban planning tools? And how to measure the real impact of Fp in decision-making considering the investment location? Nogueira (2019) interviewed stakeholders from São Paulo's development market to conclude that decision-making is crucially led by the maximum constructive potential rather than the provision of discounts. Then, construction potential is the critical variable for calculating the project's financial viability for entrepreneurs.

CONCLUSIONS

The data we explored in this chapter allowed us to draw initial conclusions about the effectiveness of OODC for urban policy legislation. It also allowed us to draw some brief parallels with the previous experience within the 2002 SMP context.

Comparatively, it is visible that OODC took on more significant proportions in 2014, strengthening its role as one of the most important tools for municipal urban policy. First, the tool's redistributive role constituted legal, urban, and political appealing pillars to the law reviewing process. The second reason is represented by the tool centrality in the 2014 plan's territorial strategy. Finally, the redistribution of additional construction potential reflects the plan's goal to densify central areas well-served by urban facilities.

As a result, OODC charges had grown substantially in the last decade, especially in 2009, when the annual fundraising reached almost R$ 400 million. Part of this fundraising increase is because of the investments resumption by the real estate sector in recent years after decelerating and retracting. Another factor was the new charging parameters, which, firstly, had land prices updated to values related to 2014. Finally, the extinction of discount mechanisms used to be applied by the past legislation.

Another hypothesis to reflect on is how the building rights was territorially distributed. For example, the strategy to abolish building rights stocks by district (following the urban structuring & transformation axes recommended by the plan) may have boost selling development rights in those areas with more significant FAR coefficient. Therefore, the reason why the tax collection increased.

The recorded revenue levels ultimately reflect the high capacity to finance urban infrastructure investments and improvements using FUNDURB resources. As a result, the municipality now has a more consolidate financial ability to provide infrastructure and urban requalification projects capable of carrying out territorial transformations foreseen in the 2014 SMP, fomenting the redistributive cycle on which the concept of the instrument is previously based.

However, the data analyzed in this chapter recommend a reinterpretation of this “virtuous cycle.” Despite efforts to drive real estate production to areas near rapid transit, more than 70% of the onerous grant charged during the 2014 SMP took place in upscale regions in the West and South regions.

It leaves a question open, though. Even though FUNDURB’s investments demonstrate the tool’s redistributive role, the city’s capacity for urban investment is more efficient when in partnership with real estate investments in expensive regions. This makes urban financing dependent on market dynamics and cycles to meet this specific demand.

Hence, FUNDURB becomes an unstable funding source for being tied to cyclical economic scenarios without guaranteeing resource provision in periods of downturns when, for instance, the need for public spending increases significantly. As a result, the real estate market's agents assume greater bargaining power in the political economy of urban planning to maintain favorable investment conditions.

Undoubtedly, this is a topic that should be explored in future research. Our analytical efforts towards comprehending the application of the City Statute's instruments made efforts to go beyond the traditional analytical framework – that, at times, assumes the tool's self-applicability presumption as though it should be ruled by law to be extensively effective. So, new arguments were brought up to broaden the debate on charging and evaluating the effectiveness of charging an Onerous Grant in the city of São Paulo. This, our intention to provide support for the 2014 SMP review process.

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4 Assessing the Urban Development Fund (Fundurb)

FROM REGULATION TO APPLICATION

Eduardo Alberto Cusce Nobre
Marília Valeiro

Abstract

This chapter analyzes the implementation of the Urban Development Fund (FUNDURB) in São Paulo. Coming from the previous concept of *Solo Criado*, the Fund's purpose is to enable investments aimed at achieving the objectives, guidelines, plans, programs, and urban and environmental projects foreseen by the Strategic Master Plan. Therefore, the research accomplished a historical survey on the emergence of its concept to analyze its regulation and management bodies. Finally, the article evaluates the Fund's effect based on how the resources were applied according to the type of work and respective location so as to understand which social strata benefited the most.

Keywords

Urban Development Fund, public investments, socio-spatial impacts, São Paulo..

INTRODUCTION

The Urban Development Fund (FUNDURB, Portuguese: *Fundo Municipal de Desenvolvimento Urbano*) is based on the 1970-concept *Solo Criado*, which stated that additional construction exceeding a single Floor Area Ratio (FAR) was subject to charges. The other alternative to additional construction would be the city receive a private land for public use in exchange, rather than paying charges in cash (AZEVEDO NETTO et al., 1977; SÃO PAULO, 1979).

The money charged goes to a specific bank account. Therefore, the funds can only acquire land supposed to host open spaces and public services, which was given as a social compensation for the increased population density. In the 1970s, São Bernardo do Campo was the first city in the state of São Paulo to adopt the *Solo Criado* principle in its Master Plan for Integrated Development. As a result, the City Hall began charging for constructions that exceeded the basic FAR, then sending money collected to the Green Areas Fund (CONTADOR, 1977).

The 1991 São Paulo Master Plan's revision recommended adopting a FAR equal to 1 within the Urban Zone – except for special zones and cases defined by law. Thus, conceptually, densified zones became the ones in which the FAR could be exceeded through financial compensation up to the limit of the available buildable area. The funds collected must go to an Urbanization Fund and be used primarily to execute Social Interest Special Zones (ZEIS) programs to meet housing demands and provide green areas, drainage and road works.

Even though the 2001 City Statute did not rule the Urban Development Fund (FUNDURB), several municipalities proposed creating it in their respective master plans. That would be the best way to collect resources from the Additional Building Rights Levy (SANTOS; MONTANDON, 2011).

The advantages of creating specific sectoral municipal funds are that the resources collected are for the specific use according to the Fund's objectives. Therefore, it is forbidden to employ such money for other purposes. Thus, for example, São Paulo Cultural and Environmental Heritage Protection Fund (FUNCAP, Portuguese: *Fundo de Proteção do Patrimônio Cultural e Ambiental Paulistano*) must be used for restoration, conservation, and maintenance services in listed buildings. The Municipal Housing Fund (FMH, Portuguese: *Fundo Municipal de Habitação*), on the other hand, is intended for executing social housing programs and projects, etc.

RULING THE URBAN DEVELOPMENT FUND

The article 235 of the 2002 Master Plan (Municipal Law 13,430/2002) ruled the Urban Development Fund (FUNDURB) to support investments in compliance with the priorities therein established. Accordingly, FUNDURB must be run by a Management Board, composed of members appointed by the Executive considering social participation.

Its investment program is subject of debate by the Municipal Council for Urban Policy (CPMU, Portuguese: *Conselho Municipal de Política Urbana*). It is sent annually for the City Council approval and afterwards attached to the City Budget Law. The 2002 Strategic Master Plan defined the following works to be funded by the FUNDURB:

I. Social housing programs and projects, including land tenure regularization and land banking.

II. Public transport.

III. Infrastructure, drainage, and sanitation works.

IV. Public facilities, such as recreational and green areas.

V. Historical, cultural, or landscape interest preservation works including public properties classified as Cultural Special Preservation Zones (ZEPEC).

VI. Environmental protected areas provision.

The master plan revision 12 years later (in 2014, regulated by Municipal Law N° 16.050/2014) added a few new works:

I. Public rental housing provision.

II. Cycling and pedestrian facilities construction,

III. Construction of linear parks, structural roads, or public transport improvements to strengthen urban hubs and linear centralities.

Article 340 of that law established that 60% of resources must be spent at::

a) 30% on well-located land for social housing purchasing or subsidizing housing programs located either in the Metropolitan Structuring Macro Area, or in the Consolidated Urbanization Macro Area, and the Urbanization Qualification Macro Area (preferably classified as ZEIS 3);

b) 30% for prioritizing public transportation, cycle lanes and paths, and pedestrian walkways.

MANAGEMENT BOARD AND SOCIAL PARTICIPATION

Considering the FUNDURB governance, its resource distribution is defined by a Management Board. The 2002 Master Plan defined that its members should be appointed by the Executive, considering social participation. However there were few definitions of its composition that varied according to the mayor in office, including more or less social participation (NOBRE, 2016).

During Marta Suplicy office (2001-2005), civil society corresponded to 32% of the FUNDURB Management Board as the representative composition were (SÃO PAULO, 2003):

- 6 from the municipal departments - Culture (SMC), Housing (SEHAB), Urban Infrastructure (SIURB), Subprefectures (SMSP), Transport (SMT) and the Environment (SVMA),
- 8 from the subprefectures,
- 2 from municipal autarchies,
- 1 from the city council,
- 8 from the civil society NGOs.

During Gilberto Kassab office (2006-2013), this composition was modified several times, but with little civil society representation and great centralization of power, as the department heads or their chiefs of staff became the representatives.

The 2014 Master Plan law defined the composition of the FUNDURB Management Board better than the 2002 decree. The article 134 of that law established

parity between government and civil society, defining its composition in ten members, five of each sector. The five representatives of the municipality were not defined, leaving the mayor to define them by decree. The five civil society representatives come from four sectoral councils:

I. Two from the Urban Policy Municipal Council (CMPU);

II. One from the Housing Municipal Council (CMH)

III. One from the Traffic and Transport Municipal Council (CMTT)

IV. One from the Environment and Sustainable Development Municipal Council (CADES).

The Fund's Management Board shall annually analyze and approve the previous year budget and publicize it on the City Hall's website.

Resolution N° 02/SMDU.FUNDURB/2011 defined the bylaws of the Fund's Management Board, consisting of a presidency, an executive secretary, and members. The head of the Urban Development Department (in Portuguese: *Secretário Municipal de Desenvolvimento Urbano*) is the FUNDURB chair, being responsible for convening and presiding over the meetings, submitting the matters on the plenary, and casting the tiebreaker vote.

The FUNDURB chair nominates the executive secretary. The executive secretary's responsibilities are:

• To prepare an annual report on the activities carried out by the Management Board

- To plan how financial resources should be spent annually, considering the bodies, responsible for its compliance, demands.

- To perform technical and administrative roles to support the Management Board's demands.

- To prepare the agendas and minutes of the meetings.

- To proceed the publication in the official gazette of any documentation, reports, and council decisions.

In addition, the representatives must cast votes, request information, suggest to the chair the examination of matters, and other acts related to their functions on the Management Board.

EVALUATING THE RESOURCES DISTRIBUTION

Since 2013, resources passed to line up with specific projects and no longer allocated into rubrics (CONSELHO GESTOR DO FUNDO MUNICIPAL DE DESENVOLVIMENTO URBANO, 2013). This improves financial control efficiency because projects have a beginning and an end, while the rubrics have no well-defined ending time. So then, the criteria for prioritizing eligible projects were as follows:

1. Projects delivering local impact results for the neighborhood's development.

2. Projects inducing urban and social development.

3. Projects associated with the Targets Program (Portuguese: *Programa de Metas*).

The internal flow takes place in four steps:

I. The resource must belong to the specific project; any changes in fund destination must need the Management Board's acknowledgment.

II. A previous high-detailed presentation submitted, according to the Fund Release Form.

III. Registration at the SIMESP - City Hall Management Platform (Portuguese: *Sistema de Gestão Informatizado*).

IV. Quarterly rendering of accounts submitted in a report writing format.

Concerning economic aspects, as most of the Urban Development Funds come from the Additional Building Rights Levy (Portuguese: Outorga Onerosa do Direito de Construir - OODC), the Fund holds a dynamic fund sourcing. For example, from 2004 to 2019, the OODC fundraised R$ 3.4 billion.

According to data from the Municipal Department of Finance (Portuguese: *Secretaria Municipal de Finanças - SMF*), from 2007 to 2018, the expenses sum up to R$ 2.4 billion. However, although the expenses did not burden Urban Development Funds before 2007, it is pretty challenging to identify how funds have been settled into each rubric until 2012. This is because the accountability minutes presented by the SMF are oversimplified; besides, it does not match with the Management Board's expenditure forecast. According to SMF reports, R$ 1.1 billion were settled into each rubric as follows:

- 30% in the "Urbanism" category,
- 28% in "Sanitation",

- 18% in “Environmental Management”,
- 16% in “Culture”,
- 8% in “Transport.”

In the minutes, the following works were described:

I. Protection of historical and cultural interest areas, Project Praça das Artes and Vila Itororó, under the Municipal Department of Culture.

II. Implementation of Linear Parks, under the Municipal Department of Environment.

III. Drainage and stream sanitation, under the Municipal Department of Urban Infrastructure and Works.

IV. Improvement of sidewalks, under the Municipal Department of Transport and the Municipal Department for the Coordination of Subprefectures.

V. Housing programs resulting from the actions previously foreseen and including those related to land tenure regularization.

As of 2013, the Management Board operation changed substantially, which allowed assessing the type of works backed. Between 2013 and 2018, the Board spent out R$ 1.3 billion in the following way:

- 25% for public transport, bicycle lanes, and pedestrian walkways.
- 24% for land expropriation and building acquisition for social housing production.

- 17% for urbanization, drainage, and slope containment works.

- 14% spent on technical services and project contracts.

- 9% in the renovation/construction of cultural and educational facilities.

- 4% in the road system reform.

- 7% in others.

Table 4.1 **Urban Development Fund (FUNDURB) expenditures by Municipal Department – in R$ million** Source: Elaborated by Marília Valeiro from FUNDURB data.

Secretariats	2013	2014	2015	2016	2017	2018	Total
Housing	78,7	84,4	102	99,2	70,6	94,7	529,6
Roads, infrastructure, and works	94,5	212,9	89,4	90,7	20,4	19,6	527,6
Subprefectures coordination	37,7	21,4	63,9	33,9	0,0	4,1	161,1
Culture	20,6	16,9	9,1	10,2	8,1	4,8	69,6
Urban Development	0,0	0,0	64,1	0,4	7,3	8,6	16,4
Environment and green areas	0,4	0,0	0,0	0,0	0,0	0,0	0,4
TOTAL	**231,9**	**335,7**	**264,5**	**243,3**	**106,4**	**131,8**	**1.304**

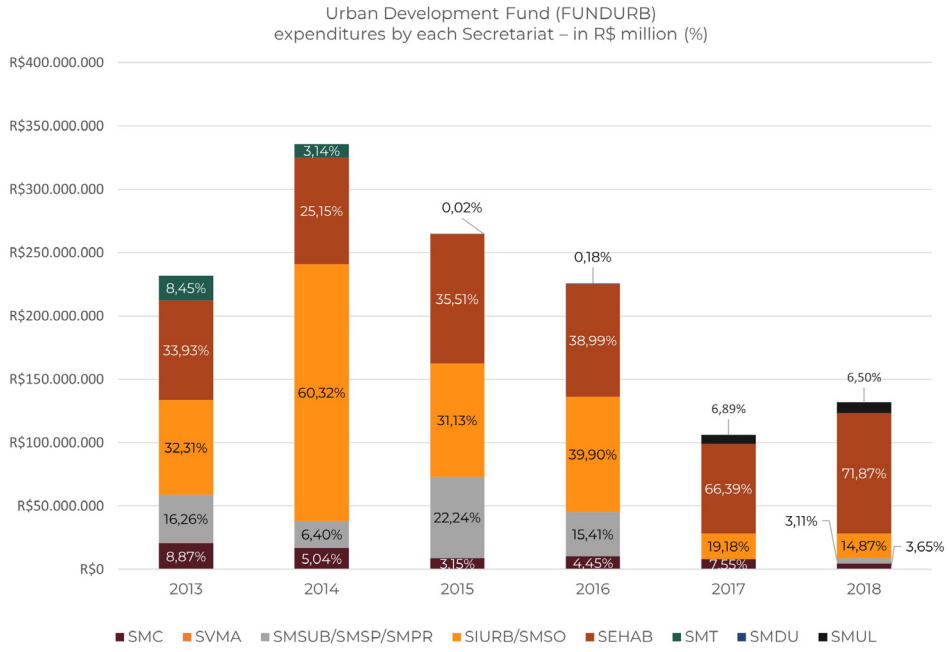


Chart 4.1
Urban Development Fund (FUNDURB) expenditures by each Secretariat – in R$ million (%)
Source: Elaborated by Marília Valeiro from FUNDURB data.

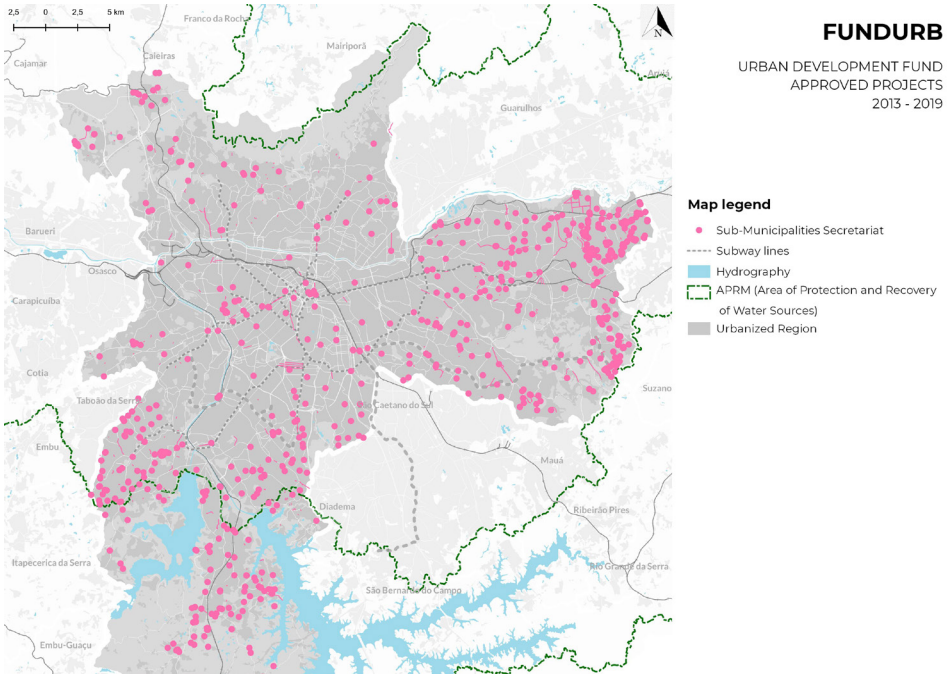
Regarding the location of investments, they varied according to each department.

The Department for the Coordination of Subprefectures (SMSP) spent R$161 million (12% of the total) according to the Table 4.2, and with a good distribution in space, as shown in the Figure 4.2. The distribution of projects observed is related to the fact that a great amount of resources were spent in sidewalks and public spaces improvements; so these resources were passed on to each Subprecture by the Department. Thus, the process was coordinated by the SMSP, but the execution was decentralized.

Type of work	2013	2014	2015	2016	2017	2018	Total
Sidewalks	28,93	2,29	41,57	23,85	-	2,82	99,45
Public Spaces	6,09	11,71	19,17	10,11	-	1,27	48,36
Cycling Lanes	1,99	6,58	1,15	-	-	-	9,72
Drainage	0,45	0,46	1,59	-	-	-	2,49
Technical Services	0,25	-	0,43	-	-	-	0,68
Slope Containment	-	0,42	-	-	-	-	0,42
TOTAL	**37,71**	**21,46**	**63,91**	**33,96**	**-**	**4,09**	**161,13**

Table 4.2 **Department for the Coordination of Subprefectures: resources spent by type of work – R$ million** Source: Elaborated by Marília Valeiro from FUNDURB data.

Figure 4.2 **The Municipal Department for the Coordination of Subprefectures: works' spatial location** Source: Elaborated by Marília Valeiro from FUNDURB data.



The Municipal Department of Housing spent available resources on some projects in the central area and some in peripheral neighborhoods. According to Table 4.3, most funds (36%) expropriated land and acquired empty buildings for social housing. In contrast, sanitation, drainage, and urbanization services accounted for 19%, and social housing units for 17%. Technical assistance (projects, management, registration, monitoring, etc.) received 22% of the funds. The Department addressed the remaining 6% to the São Paulo State Housing and Urban Development Company (CDHU, Portuguese: *Companhia de Desenvolvimento Habitacional e Urbano do Estado de São Paulo*) through the Casa Paulistana Program partnership.

Table 4.3
Department of Housing: resources spent by type of work – R$ million
Source: Elaborated by Marília Valeiro from FUNDURB data.

Type of work	2013	2014	2015	2016	2017	2018	Total
Expropriation	-	-	66,8	47,6	0,39	-	114,8
Technical Assistance	36,4	27,7	9,3	20,0	10,1	3,4	106,9
Social Housing execution and qualification	-	-	18,0	-	18,6	42,5	79,1
Purchase of Buildings	-	-	-	-	29,0	48,9	77,9
Urbanization Services	18,9	29,0	6,0	-	-	-	53,9
Drainage	11,6	15,6	1,8	3,2	-	-	32,2
Casa Paulistana Program	-	-	--	28,4	-	-	28,4
Sanitation	10,6	2,6	-	-	-	-	13,2
Social Housing Production	-	-	-	-	12,4	-	12,4
Urban Plans	1,3	9,4	-	-	-	-	10,7
TOTAL	**78,7**	**84,4**	**102,0**	**99,2**	**70,6**	**94,7**	**549,6**

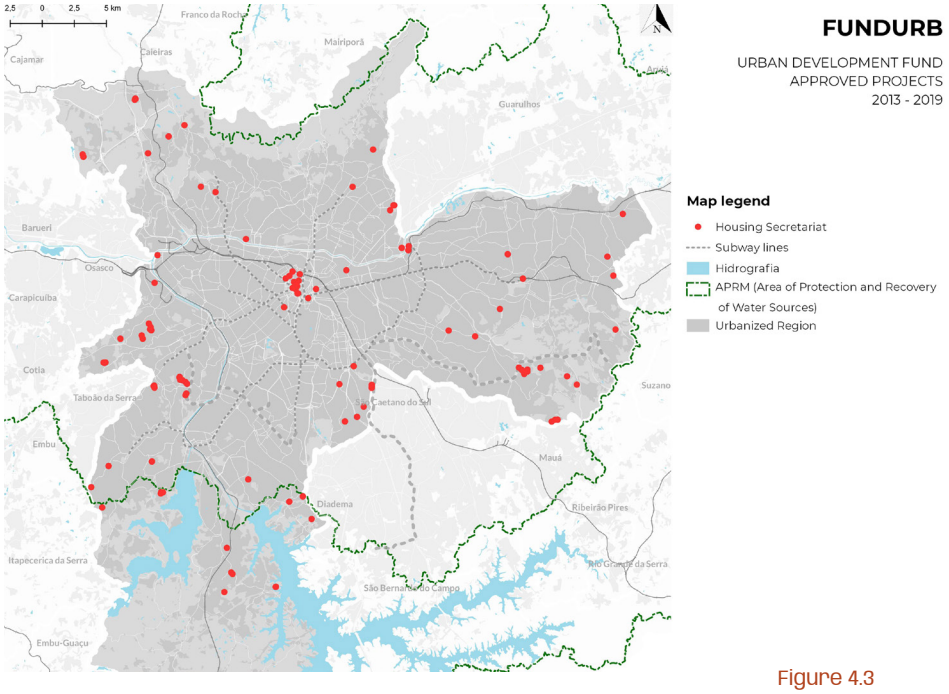


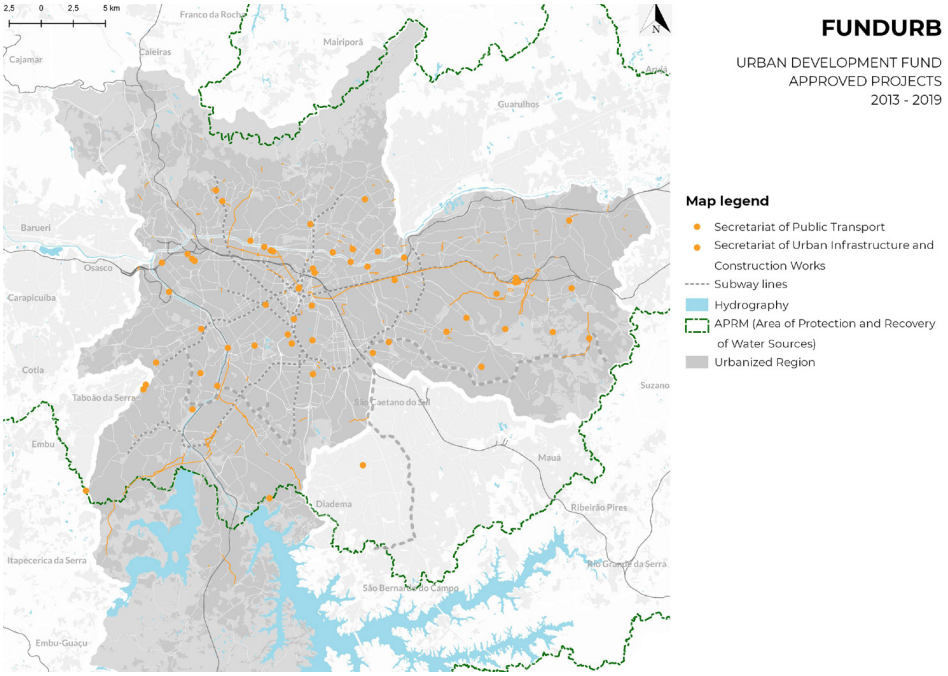
Figure 4.3
The Municipal Department of Housing: works' spatial location
Source: Elaborated by Marília Valeiro from FUNDURB data.

The secretariats accountable for carrying out road works, transport, and urban equipment were the Municipal Department of Transport (SMT), the Municipal Department of Urban Infrastructure (SIURB), and its successor Municipal Department of Services & Works (SMSO). Investments varied by location. Most resources (44%) went to bus corridors and terminals, connecting the central area to the city's outskirts. Some neighborhoods were also awarded by urban equipment (22%), such as Unified Educational Centers (CEU) and flood control reservoirs.

Table 4.4 **Transport, Urban Infrastructure/Services, and Works Secretariats: resources spent by type of work – R$ million** Source: Elaborated by Marília Valeiro from FUNDURB data.

Type of work	2013	2014	2015	2016	2017	2018	Total
Bus corridors & terminals	15,4	66,2	84,3	24,8	7,1	12,8	210,7
Streams drainage	18,7	93	-	-	-	-	111,7
Land expropiation	25,9	28,7	-	-	-	-	54,6
Technical assistance	-	25	5,1	4,5	10,1	5,8	50,5
Centros Educacionais Unificados - CEU	-	-	-	50,1	-	-	50,1
Road works	24,8	-	-	9,3	-	-	24,1
Garage at Praça Roosevelt	5,6	-	-	-	-	-	5,6
Drainage	-	-	-	1,9	3,2	-	5,1
Signaling, monitoring, and control	4,2	-	-	-	-	-	4,2
Fábrica do Samba (Samba Factory)	-	-	-	-	-	1	1
TOTAL	**94,5**	**212,9**	**89,4**	**90,7**	**20,4**	**19,6**	**527,5**

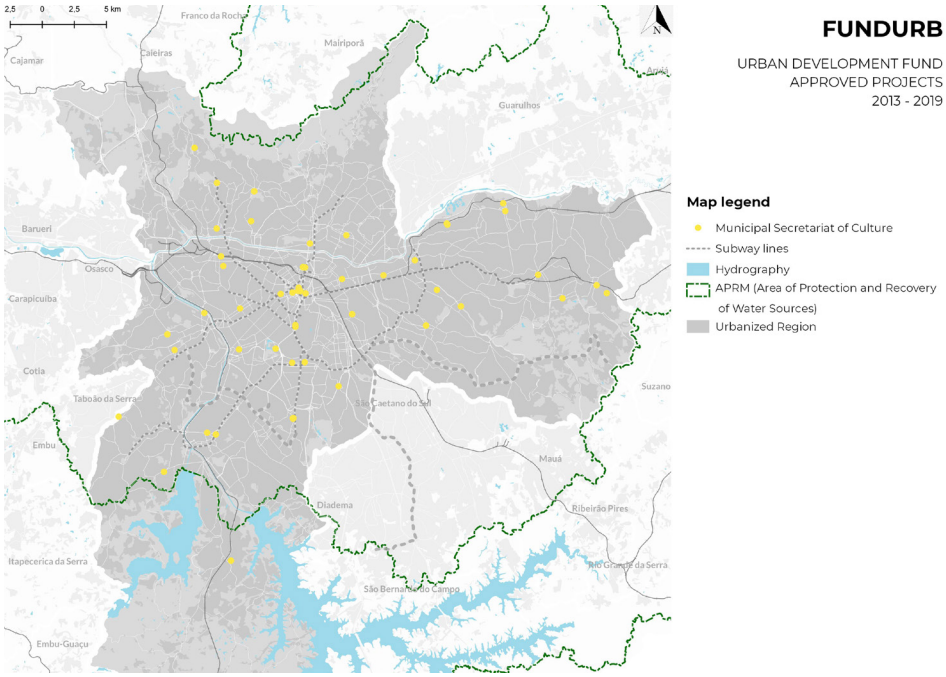
Figure 4.4 **Transport, Urban Infrastructure/Services, and Works Secretariats: works' spatial location** Source: Elaborated by Marília Valeiro from FUNDURB data.



Type of work	2013	2014	2015	2016	2017	2018	Total
Renovation/ restoration of cultural facilities	19,1	10,3	3,3	2,6	1,6	-	36,9
Sampaio Moreira Tower	1,4	6,6	5,6	6,9	6,5	0,5	27,5
Conservation of Heritage	-	-	-	-	-	4,2	4,2
Technical assistance	-	0,04	0,1	0,6	0,04	0,07	0,91
TOTAL	**20,6**	**16,9**	**9,0**	**10,2**	**8,1**	**4,8**	**69,6**

Table 4.5 **Municipal Department of Culture: resources spent by type of work – R$ million**
Source: Elaborated by Marília Valeiro from FUNDURB data.

Figure 4.5 **Municipal Department of Culture: works' spatial location**
Source: Elaborated by Marina Pinheiro Marques from FUNDURB data.



Finally, the Municipal Department of Culture spent almost 40% of the resources on just one type of work: the renovation and restoration of the Sampaio Moreira Tower in the São Paulo City Center (the department's headquarters). The rest of the resources went for the renovation, conservation, and refurbishment of cultural facilities throughout the city.

FINAL CONSIDERATIONS

This chapter shows that the Urban Development Fund (FUNDURB) was supposed to support investments to achieve the objectives, guidelines, plans, programs addressed by the São Paulo Strategic Master Plan. Therefore, the Fund referenced the principles foreseen in the Targets Program of the Municipality following the priorities established therein.

Considering that, after 2013, most investments (50%) wound up going for public transport, bicycle lanes and pedestrian walkways improvements, and expropriation for social housing; the Fund appears to be working towards the principles established.

However, given the low articulation between the departments with other municipal councils, the resulting actions did not have enough coordination to maximize their efficiency. As a result, the projects did not pass through the scrutiny of their respective councils, as they must have done.

More excellent articulation between the departments and their respective councils would have been crucial to achieving this goal. The lack of specific sectoral plans (Housing, Transport, Heritage Conservation, etc.) means that resources are spent in a dispersed manner. Therefore, little progress has been seen so far, despite all the investments.

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Advances and setbacks on financial incentives to protect São Paulo's Historic Registered[1] Buildings

Dulcilei de Souza Cipriano

Abstract

This chapter discusses urban planning tools known as TPC (Transfer of Constructive Potential – in Portuguese *Transferência do Potencial Construtivo*) and TDC (Transfer of Development Rights – in Portuguese *Transferência do Direito de Construir)*. They were disposed of in the city of São Paulo long before their embodiment into Federal Law 10,257/2001 – Statute of City (in Portuguese *Estatuto da Cidade*). Initially, it only covered classified and listed properties. In force for more than tewnty years, this planning tool is still poorly studied and disclosed. These are two of the factors that have made it inconsistent over the years. For this reason, we are willing to investigate its effect on protecting the city's historic registered buildings.

Keywords

cultural built heritage, development rights, air rights, zoning.

INTRODUCTION

Both state and society have a duty to preserve the Brazilian cultural heritage using techniques so that such cultural assets can last for future generations. Among the benefits offered by the São Paulo's municipality to safeguard heritage (more specifically, built heritage), we can mention the TPC (Transfer of Constructive Potential in Portuguese *Transferência do Potencial Construtivo*) and TDC (Transfer of Development Rights in Portuguese *Transferência do Direito de Construir*).

In this work, we chose to conceptually separate what, in the reference bibliography, is usually only separated for nomenclature reasons. Thus, in our understanding, the TPC is established as a divergent urban planning tool from the TDC. The latter is equivalent to the American Transfer of Development Rights (TDR) tool. TDCs allow landowners to sell development rights from their land to a developer (or other interested party) who then can use these rights to increase the density of development at another designated location. In contrast, TPC is simply referred to the right to occupy a particular empty space from the basic to the maximum Floor Area Ratio (FAR).

Finally, our analysis comprises the period between 1998 and 2018. The first year refers to the beginning of São Paulo Central Area Urban Operation's scope in which TPC was one of the urban planning tools, and the year 2018, when the planning tool celebrates its 20th anniversary. Considering that in these twenty years, the scope of its action has expanded through the institution of two Master Plans, we seek to evaluate how effectively the device operated in its three phases, seeking to verify if it cooperates to safeguard the built heritage in São Paulo.

1. In Brazil we normally do not use the terms Listed or Classified to designate a historic building, the main term is called ***Tombamento*** and this word indicates that building was preserved by having its name on a book entitled ***Livro do Tombo***, meaning it was registered and has to be preserved for future generations. To better understand in this text we will be using the term Registered to indicate a ***Tombado*** Building.

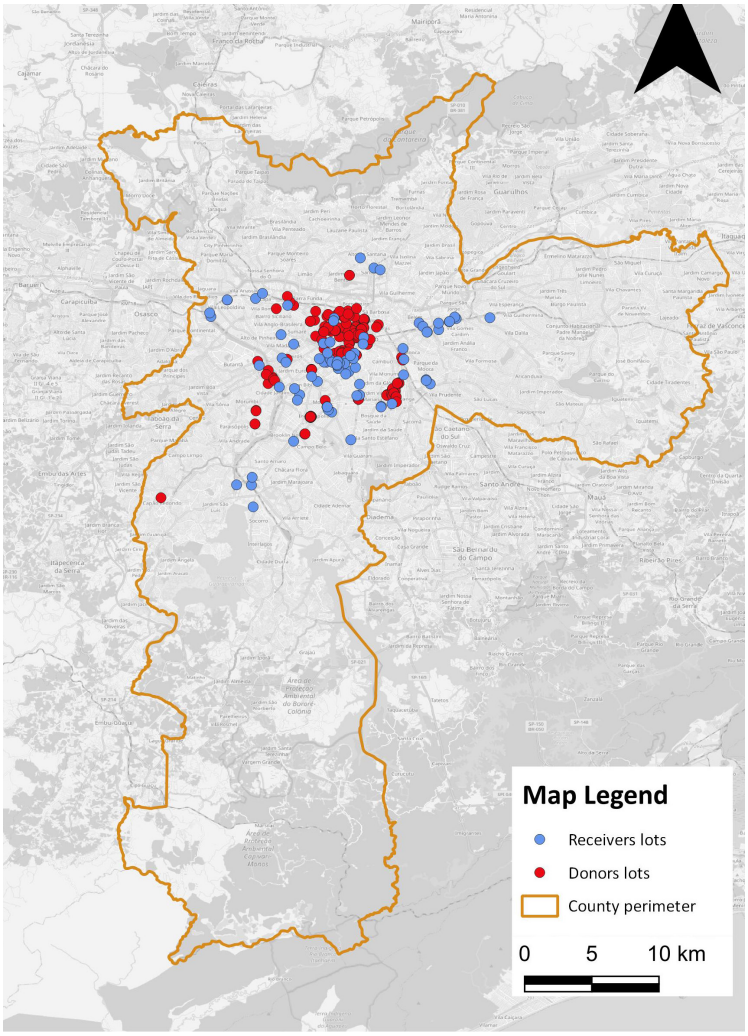


Figure 5.1 **Spatialization of potencial declarations issued between 1998 and 2018**
Source: Prepared by Dulcilei Cipriano from data from the Official Gazette of the City of São Paulo.

INTERNATIONAL BACKGROUND

Although the Anglo-Saxon original version of TDRs dates to 1947 in the U.K. (ROSE, 1979), we adopted 1971 as their legal-time framework, as in this year, the United Nations Economic Commission for Europe technicians and experts in urban planning, housing, and development created the concept of *Solo Criado* (Created Developable Land) in Rome (CARDOSO; RIBEIRO, 2012).

This document is an international landmark that first addressed[2] this instrument. It proposed separating the right to own property from the right to develop it. Still, the right to build should be subject to the community's benefit through concession or administrative authorization. In 1975, the Italian government proposed giving such a bonus exclusively to landowners committed to financially contribute to expand public urban facilities (FURTADO et al., 2011).

Also, in 1975, the French government enacted a land reform policy to reduce social inequalities by increasing control over land use and occupation. The reform sought to solve unequal distribution of the right to "sell" a property's development potential to owners of less-restricted land. It proposed that permission to increase beyond the basic FAR should be subject to pay fees. For that, the urban planning tool *Plafond Légal de Densité* (PLD) had a rule imposing limitation on development rights. Landowners could only build the amount in square meters corresponding to the exact size of their land. A FAR equal to 1 restricted the rule, except for Paris, where the value was limited to 1.5. Those wishing to exceed this limit should pay the Municipality a proportional fee to obtain the planning permission. The amount earned through charging should go to a

2. Several European countries were discussing the theme at the same time. However, we understand that this document is the consolidation of those ideas.

fund intended to compensate landowners that cannot afford to build above the maximum FAR, including the protected historic properties owners (CIPRIANO, 2018).

The discussion about separating the rights of property owners from the right to build mattered not only in Europe but in the U.S. as well. The first American city to rule property rights was New York in 1961, when the Floor Area Ratio (FAR) became the primary technique used to control development density. As a result, development rights became a high-value commodity. The City enacted the first variation of the TDRs mechanism, the Zoning Lot, used to merge two lots, then achieving higher-dense neighborhoods (NYC, 1961; BEEN, 2013).

However, the Zoning Lot did not cover landmark properties, because there was not legislation to preserve historical and artistic buildings of interest. Afterwards in 1968, three years after the enactment of the Landmarks Law, the City of New York changed the Zoning Law, implementing a new urban planning tool to reduce the financial burden that could come with a designation of a building as a cultural heritage.

The case of Grand Central Station in that city is the best-known Landmark TDR dispute. The owners of the Terminal claimed that its designation as a landmark would decrease the monetary value of the building, so they were authorized to transfer to neighboring properties the permitted, but unused building rights before the Terminal's designation as a landmark.

After an amendment in the law that also expanded the districts that could receive the transfer of the building right in the city, the owners of Penn Central Transportation Company won in court the right to transfer 100% of their unused FAR, previously it was only possible to transfer 20% (NYC, 1969).

The Old Chicago Stock Exchange Building[3] is another one of the well-known landmark TDR cases. The search for solutions to avoid its destruction contributed to create a financial compensation mechanism for the owners, as they did not accept to use the New York planning tool. The Space Adrift tool, conceived by John Costonis in the Chicago Plan, aimed to save urban landmarks from destruction. This tool could allow owners of listed properties to transfer or sell their property's development potential to landowners with properties restrained by urban plans (COSTONIS, 1975).

Some studies show that the mechanisms above, specifically the models adopted in France and the United States, influenced deploying the TDRs version for São Paulo. Its initial version assisted in protecting historically registered buildings, as in the two American cases, but following the French guidelines (CIPRIANO, 2018).

3. This building, demolished in 1972, was designed in 1869 by Louis Sullivan and Dankmar Adler and was one of the most significant examples of the Chicago School of Architecture (CIPRIANO, 2018).

The U.S.A. experience with Transfer of Development Rights (TDR) in New York City

New York's TDRs was the first preservation planning tool to spread over thirty cities in the U.S. Although Brazilian TDR is not directly correlated with the New York instrument, it influenced the conception of Space Adrift tool (CIPRIANO, 2018). In the U.S., responsibility for regulating land use is due to local governments. Fundamentally, the federal government cannot intervene in state regulations; therefore, it acts strictly among the highest echelon of land regulation. The American National Constitution sought not to interfere with existing state legislation; hence, state governments have delegated municipalities to regulate land use (SUTTON, 2008).

The 1916 New York City Zoning Ordinance was the first in the U.S. to allow owners of adjacent lots to combine their air rights to build a tower exceeding the height restrictions established in the zoning regulations. Later, courts upheld it as the basic zoning power for several cities in America (New York, 2010). The technique sought to restrain skyscrapers from taking the city's space. "Zoning envelope" was one of the principles used to display the maximum extent of a building, hindering height and setbacks. Yet, such regulation worked more as an emergency response to a still untimely problem, as at that time, historic buildings were not seen yet as an urban heritage to be protected (BACKER, 1975).

New York's preservation movement appeared disconnectedly from urban legislation, unlike other cities in the U.S.A. The creation of a body responsible for preserving historic monuments coincided with discussions on the first city's zoning changes between 1950 and 1960 (GILMORE, 2013). While the law was not enacted, conservationist groups requested law amendments against the mass demolitions resulting from the city's Urban Renewal program. In the specific literature, these mass demolitions became known as "bulldozer policy." Despite all their efforts, they were not successful (LEACH, 1960; CIPRIANO, 2018).

The New York City Landmarks Law was passed in 1965[4] to preserve historic landmarks and neighborhoods and its legislation stablished the NYC Landmarks Preservation Commission, which is responsible for designating places of historical and artistic outstanding significance. The enactment of a Law limiting property rights appeared as an obstacle to the economic and urban expansion of the city for NYC real estate market, if we consider that development rights reached high real estate interests given the redefinition of density control and the lot concept by the 1961 zoning (CHUSED, 2010).

4. New York City's Landmarks Preservation and Historic Districts Law (Landmarks Law) promulgated in 1965.

Therefore, given the potential financial restrictions that a historic building could cause to its owner, the law stated that they could seek assistance from the Municipality if the Commission had denied first exemption requests. Then, owners and the Commission together must have to put forward a preservation plan to get partial or total exemption from tax charging (CHUSED, 2010; GILMORE, 2013).

Even though, the law provided financial mitigation for owners, the pressure over landmark sites with spare building areas at upscale addresses was tremendous. So, in 1968, an amendment allowed historic buildings to transfer their development rights to other properties to reduce the financial burdens of being a culturally built heritage (New York, 1968).

The Transfer of Developments Rights mechanism was implemented in 1961[5], however, it could only be carried out by combining adjacent lots, thanks to the definition of Zoning Lot adopted by the legislation approved that year. According to the Zoning Lot conception, a real estate developer could merge two contiguous lots[6] to achieve a higher density. Such a mechanism is currently known as Zoning Lot Merger[7]; it is one of the three types of TDR applied in New York[8]. Besides, it does not require municipal approval for trading air rights (BEEN, 2013).

In 1961, there was not legislation to designate landmark buildings despite their growing concern among preservationist groups. Thus, three years after the Landmark Law went into effect, New York City passed Zoning Resolution (Z.R.) §74-79. In addition, the 1968 law allowed transferring their development rights to adjacent lots or the ones across a street and opposite the lot occupied by the landmark building or other structure within specific districts. This way, New York City granted owners of landmark buildings plus benefits one more time (NYC, 1968).

5. The resolution was responsible for dividing New York City into residential, commercial, and industrial uses. Furthermore, adding an extra bonus to encourage public spaces into commercial and residential buildings (New York, 1961).

6. Lots on the same tax property.

7. Merging zoning lots is the simplest TDR model. It involves transferring development potential between lots on the same fiscal property, with no limitations regarding the square meter obtained from the merger.

8. 1 – Zoning Lot Merger; 2 – Landmark Transfers and; 3 – Special District Purposes.

The urban planning tool established by ZR §74-79 is currently known as Landmark Transfers and it is a special permission that allows development rights to be transferred to adjacent lots from lots occupied by landmark buildings, the definition of “adjacent lot” given by the legislation allowed development rights to be transferred from lots occupied by historic buildings to lots more distant than ones permitted by Zoning Lot Merger, but in the early years of the law, the receiving lots could not increase more than 20% above their development potential (basic FAR).

As a counterpart, owners must submit a commitment plan to protect the building’s historical and aesthetic characteristics. Unfortunately, the legislation did not specify what the project must do or how development rights must have been priced. At that time, the government argued that each landmark building was unique, so each one demanded a particular solution consequently. Nevertheless, technically, rights have been sold according to real estate market conditions and always considering the value of the neighborhood (NEW YORK, 1968; GILMORE 2013).

Initially, the first procedure to request TDRs was consulting with the Landmarks Preservation Commission (LPC), responsible for approving the preservation plan and the building design to be constructed onto the lot. Besides, the receiver lot must always surround the donor lot. The project must also ensure that the building should be aesthetically friendly with the bordered landmark. Failure to comply with such guidelines would configure Commission to refuse the request for approval (NEW YORK, 1968).

Currently, the process remains to operate identically; yet LPC focuses only on checking whether the restoration measures are feasible with the conditions required without concern about architectural aesthetics even if the new building is allocated in the surrounding of the historic building. Soon after LPC approves the plan, the transfer request is submitted to the Department of City Planning (DCP) for zoning requirements. It is noteworthy that both stages go through a public hearing[9] held by the DCP. Its approval or not configures as the final stage (GILMORE, 2013; NY, 2020).

The legislation has undergone a few significant changes over these fifty years. The most relevant of them (and, as far as we can judge, the most prominent) was the case of Penn Central Transportation Company / New York City when Law changed conditions to transfer development rights for this specific property[10]. The law expanded the scope of areas eligible to receive the development potential, encompassing strictly commercial districts where the land price is one of the highest worldwide, such as Manhattan Midtown. The law also waived the maximum percentage previously stipulated as 20%, thus allowing owners to increase FAR by 100% (NEW YORK, 1969; BARROS et al., 2020).

The case of Grand Central Station established the Landmark TDR program in New York City. However, after fifty years, the tool in its template designed for historic buildings has performed well below expectations. In 2013, the total number of buildings designated as Landmark was around 1,400, but barely eleven performed transfer development rights, and just one was carried out in a residential area. The largest amount of development rights transactions occurred in the area designated as Midtown Manhattan, which is composed of commercial buildings and where the maximum FAR can be exceeded in order of 100 % (GILMORE, 2013).

9. Public hearings must take place within 2 months after the LPC architect or the urban planner, in the case of the CPC, has accepted all documents presented by the proponent.

10. The instrument was only regulated by the State of New York in 1980. The Grand Central case is a great representative.

After this brief analysis of this NYC urban planning tool, we understand that the low demand was because of the competition with the other two types of TDR available because, unlike Landmark Transfers, they did not require at least two public hearings to approve the projects. However, we also consider the limitation imposed by other zoning parameters in the assignee lot as a failing factor. The mechanism does not exempt bidder from meeting urban parameters such as template, setback requirements, lot maximum occupancy, and parking area. Thus, lots within low-density neighborhoods face difficulties receiving FAR. As a result, it is difficult for the mechanism to be a feasible, profitable opportunity for all landmarks regardless of their location.

AN URBAN PLANNING TOOL TO PRESERVE THE HISTORIC BUILDINGS IN SÃO PAULO

The tool called TPC or TDC is a municipal permit that allows owners of registered buildings to develop in another location the same development rights foreseen for their lot, and which cannot be performed therein for specific reasons explained by the Zoning Law. Such a grant is carried out by paying a fee or by donation. The potential development transfer is subtracted from the donor lot and registered in the recipient lot.

According to the City Statute (in Portuguese: *Estatuto da Cidade*), the Federal Law 10,257/2001 that rules urban planning across Brazil, this urban planning tool can be used not only to preserve historic buildings, but also in cases considered necessary for implementing urban and community facilities, land tenure regularization, slums upgrading and social housing provision. Besides, the municipality can use such tool when properties are considered historical, environmental, landscape, social, or culturally relevant to the city (SÃO PAULO, 2014).

Also, according to the *Estatuto da Cidade*, municipal legislation is responsible for establishing operational features, the maximum and basic FAR, and how much development potential can be sold considering constructive indexes between distinct lots.

In this text, we will analyze the tool application available for historic registered properties in the City of São Paulo. In 1984, this city pioneered in selling development rights long before its institutionalization by the *Estatuto da Cidade*. Despite the fact that São Paulo currently holds approximately 3,600 registered properties, this is the unique mechanism offered to encourage owners to protect built cultural heritage.

Brief History on Transferring Development Rights in São Paulo

The *Estatuto da Cidade*, in its article 40, rules the provisions of the 1988 Federal Constitution, defining the Master Plan as the primary instrument to be executed by the municipalities. This Act establishes the rules of public order and social purposes, which regulate urban land use for the benefit of society. The Plan is mandatory for all cities with more than 20,000 inhabitants and must cover all urban policy instruments that the municipality will need to implement city planning.

The municipalities do not have to implement all the tools disposed at the *Estatuto da Cidade*, given the differences between cities related to size, history, and region. However, in order to use some of them, in addition to their establishment in the Master Plans, the tools need to have basic criteria for their implementation.

From 1970 to 1984, the State of São Paulo had brought off several studies to investigate the feasibility of transferring development rights (CIPRIANO, 2018). In 1984, long before the approval of the *Estatuto da Cidade*, the City of São Paulo enacted a law allowing owners to sell unused development rights to compensate financial burdens on listing ownership around the high end address at *Avenida Paulista* (SÃO PAULO, 1984).

TDR was one of the three land-use planning tools presented by a study developed by the Center for Studies and Research of the Municipal Public Administration (CEPAM, Portuguese: *Centro de Estudos e Pesquisas da Administração Pública Municipal*). The proposal was built on the *Solo Criado* conception, used for the first time on this document (CIPRIANO, 2018), aiming to control land use in the face of political and economic pressures. For that purpose, CEPAM recommended establishing a basic citywide FAR (SÃO PAULO, 1975).

Acquiring the right to construct above the maximum FAR in another place came up as wise strategy. According to the study, TDRs were permitted between lots facing the donor lot or a hundred meters away from it. Controlling how development rights would be transferred through a Property Registration Certificate, including buying or selling rights. The city should request this certificate when a planning permission is required for the assignee lot.

It is worth noting that the discussion on the TDR began even before the municipality had a Preservation Council to advise about historical places. In December 1975, the City of São Paulo passed Law 8,328/1975 to safeguard buildings of great intrinsic value in the historic city center by zoning through category Z8.200. But, TDR regulation through law only took place ten years

after the enactment of Law 9,725/84 – responsible for establishing the Municipal Council for the Preservation of Historical, Cultural, and Environmental Heritage of the City of São Paulo (in Portuguese: *Conselho Municipal de Preservação do Patrimônio Histórico, Cultural e Ambiental da Cidade de São Paulo*), this council is responsible for deliberating on the tipping of movable and immovable assets at the municipal level - which, unfortunately, was not successful due to the factors transcript in the citation below, and considering that only one transfer process occurred through it (SÃO PAULO, 1984).

> However, despite Law 9,725/84 aiming for a greater commitment of private agents in historic properties preservation, this mobilization did not come to fruition. On the one hand, since the areas bordering the Z8-200 already had a high coefficient of land use, thus not arouse interest in its acquisition. In contrast, other mechanisms that would be implemented in the following years (such as Interconnected Operations) would be much more attractive to the real estate market, which, not interested in the central region, wanted to make urban legislation more flexible in other areas of the city[11] (JOSÉ, 2009. p. 60. our transcription)..

The discussion on using TDRs for landmark properties began even before the Municipality had legislation to protect it. In December 1975, São Paulo approved Law 8,328/1975 to safeguard buildings valued for their special historical interest in the historic city center. They are now protected by zoning through category Z8.200.

Even though TDRs went into legal effect in 1984, the Municipal Council for the Preservation of the Historical, Cultural, and Environmental Heritage of the City of São Paulo (DPH, Portuguese: *Departamento do Patrimônio Histórico*) did not succeed in taking ahead listing assets at the municipal level — only one TPC process was successfully passed under the Council's assignments (SÃO PAULO, 1984).

11. In Portuguese: No entanto, apesar da lei 9.725/84 visar a um maior comprometimento dos agentes privados na preservação dos imoveis, esta mobilização não chegou a se efetivar. Por um lado, porque as áreas lindeiras a Z8-200 já possuíam um alto coeficiente de aproveitamento do solo, não despertando assim o interesse pela aquisição. E por outro porque, comparativamente, outros instrumentos que seriam lançados nos anos seguintes (como as Operações Interligadas) seriam muito mais atrativos para o capital imobiliário que, desinteressado pela região central, desejava a flexibilização da legislação urbanistica em outras áreas da cidade (JOSÉ, 2009. p. 60).

Even though Law 9,725/84 sought to increase private agents' commitment to listing properties, such a mobilization did not achieve fruition. On the one hand, areas adjacent to the Z8-200 already had a high land-use coefficient, thus not stimulating acquisition. And on the other hand, comparatively, other planning tools that went into effect later (such as Interconnected Urban Operations) were much more attractive for real estate capital. Uninterested in the central region, the real estate capital sourced investing whereby urban legislation was more flexible (JOSÉ, 2009, p. 60).

In 1991, the mechanism reappeared, now calling Transfer of Construction Potential (in Portuguese: *Transferência de Potencial Construtivo – TPC*), in Urban Operation *Anhangabaú* (Law 11,090/1991). In it, properties preserved by Z8,200 and those supposed to be protected by Preservation Council[12] could have built potential sold for the entire city since the FAR did not exceed 50% of the donor lot. Although Urban Operation *Anhangabaú* lasted three years, it did not have TPC's transactions.

TPC was also the land-use tool chosen by Urban Operation City Center (In Portuguese: *Operação Urbana Centro*) to motivate owners to protect their landmark properties in the central area of São Paulo. The urban operation was launched in 1997 with the main aspiration of strengthening the greatness of the city's historic buildings, and it is still in effect to date, though it has not had satisfying outcomes so far despite the fact, that the urban operation perimeter holds the most significant quantity of listed properties per square meter in town (SÃO PAULO, 1997). Currently, TPC is under review for not having achieved the city hall's goals as expected. Critiques about the procedures to transfer constructive potentials and competition between TPC and other mechanisms are some of the subjects of debate.

12. The preservation of a landmark starts with a study and the São Paulo's heritage laws consider it as a protection, even if in the end this is not approved by the Council.

As already mentioned, the *Estatuto da Cidade* amended TDC scope by allowing them to be used in land tenure regularization and social housing programs. The 2002 City of São Paulo Master Plan provided the transfer following the Statute's guidelines and expanded it to green areas and urban facilities as eligible for TPC[13]. For each case, owners must send work stipulations to City Council. Besides, all requests must be limited to 50% of the floor area ratio prescribed by the recipient lot's FAR (SÃO PAULO, 2002).

The TPC in 2002 Master Plan (Law 13,430/2002) was allowed to the owner of registered buildings at the national, state, or municipal level to transfer the difference between the existing FAR and the maximum FAR for the recipient lots whose FAR could be exceeded. Recipient lots should be within the Strategic Project Areas, up to 300 meters from mass public transport axes and up to 600 meters from metro and train stations.

13. The 2002 São Paulo Master Plan used TPC as nomenclature.

During the term of 2002 Master Plan, TDR had two names: the first of them as *Transferência do Potencial Construtivo*, (TPC); the second as *Transferência do Direito de Construir* (TDC). The 2014 revision of the Master Plan determined the latter as the official designation, interpreted here as Transfer of Development Rights to provide a better contextual-understanding for English-language readers. Law 16,050/2014 established TDRs linking it to the basic FAR; that is, the owner can transfer its lot area regardless of the building's size.

Therefore, the continuous usage of the two terminologies into law configures a conceptual disarrangement, in our opinion, as development potential acknowledges a built area and not its lot area, as TDC now establishes as more suitable. It is worth pointing this issue out because the happenings of TDCs in São Paulo have

been quite different from other Brazilian cities. For this reason, it is crucial to outline labeling inaccuracies that might translate into conceptual problems because they constitute the barriers faced by TDR to attain success.

TDC, as provided by the 2014 Plan, were available for the same categories already assumed in the previous plan, namely:

- Properties classified as ZEPEC – BIR21[14] and ZEPEC - APC 22[15];

- Properties donated to the Municipality in the ZEIS for Social Housing purposes;

- Real estate lots or plots located within the Environmental Protection Macrozones and private properties included as green areas or those covered by meaningful vegetation.

In the case of registered properties (ZEPEC-BIR), TDCs can proceed according to the assigning lot's basic FAR on the condition owners submit a document proving its state of conservation. If this is not adequate, the Municipality requires compulsory solutions to restore the building.

The new transfer model establishes recipient lots in areas where the maximum FAR is greater than 1:1. The model also conditions the issuance of a certificate upon proof that the assigning property is under proper restoration conditions. In other words, the transaction can only happen if owners can prove they adopted solutions to preserve or restore the registered property, which the 2002 Master Plan did not stipulate as an owner liability. Thus, despite advances, such rules insist upon limits that may come to represent barriers to cooperating with protecting cultural built heritage.

14. The Special Zone of Cultural Preservation - Representative Assets of Interest (ZEPEC - BIR) seeks the preservation "of listed properties and built elements, buildings and their respective areas or lots with historical, architectural, scenic, artistic, archeological and cultural value" (SÃO PAULO, 2002, art. 116).

15. The Special Cultural Preservation Zone – Cultural Protection Areas (ZEPEC - APC) has as its specific purpose of preserving and enhancing properties intended for cultural and artistic values (SÃO PAULO, 2014).

The new legislation stipulates TDRs not exceed 5% of the total amount collected by the Urban Development Fund (FUNDURB) over twelve months, this condition is a barrier to small owners. For example, let's suppose a large-sized lot that transfers all its rights accordingly with its full potential. In that case, the Fund's ceiling may be reached without giving a chance for other owners to sell their rights. Another questionable factor was the association of the right-transferred value with the Onerous Grant of the Right to Build (In Portuguese: *Outorga Onerosa do Direito de Construir – OODC*) value. Previously, deals used to follow market price to prevent transactions from getting too expensive to the detriment of the Onerous Grant.

We understand that the institution of TDCs is yet too recent to pass judgments on its effectiveness conclusively. However, we will address a brief-assess balance considering the first four-year period as a correlation parameter with the devices discussed in the preceding chapters. Thus, this regulation made headways comparatively with others; consequently, it upheld a more technical-effective behavior in its beginnings.

The Experience of TPC Within Urban Operation City Center's Scope

São Paulo has approximately 3,600 registered properties. Less than 10% of them had requested a declaration of construction potential by 2018. In twenty years, roughly an area of 240,500.00 square meters[16] that previously belonged to registered properties was traded (Figure 5.2). In contrast, 316,000.00 square meters had received potential from other properties, corresponding to the value of nearly 40% of issued-certificated transactions. These values refer

16. Due to a data mismatch between the spreadsheet available on the city hall's website and data issued in the Official Gazette, we chose to compute only numbers made public: Available at: https://www.prefeitura.sp.gov.br/cidade/secretarias/upload/Relat%C3%B3rio%20FUNDURB_Agosto2020.pdf.

to the following periods in which TDR were in force: Urban Operation City Center (Law 12,349/1997), 2002 City of São Paulo Strategic Master Plan (Law 13,430/2002), and 2014 City of São Paulo Strategic Master Plan (Law 16,050/2014).

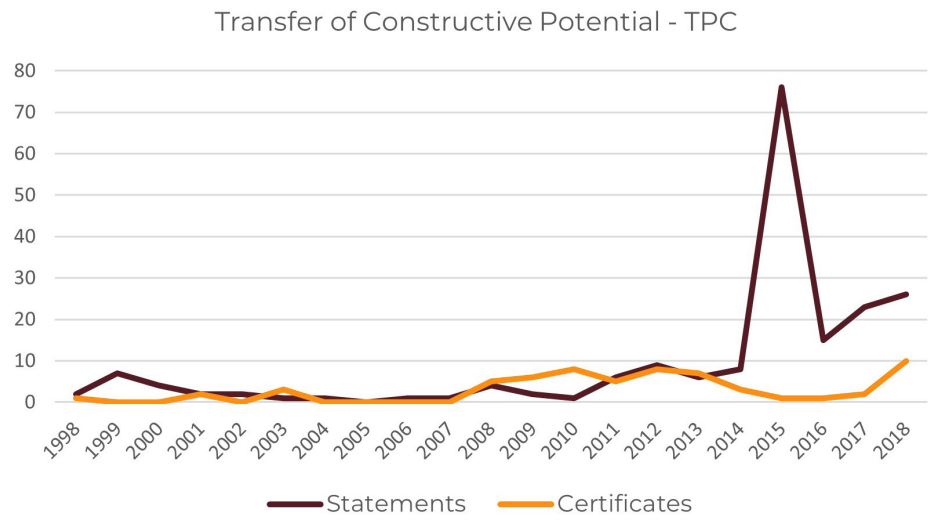


Figure 5.2
Analysis of the instrument progress over the years
Source: Prepared by Dulcilei Cipriano from data from the Official Gazette of the City of São Paulo.

Firstly, this analysis verifies how the Urban Operation City Center and Master Plan 2002 deployed TPCs separately and then aggregately. Subsequently, we will ascertain the performance of TDCs in the initial years of the 2014 Master Plan; thus, we will finish comparing the three periods. We understand that the division into periods of legislation is unavoidable since the operating criteria are different and, in our view, influence the result of each one's performance during its term.

Initially, within Urban Operation City Center's scope, rights could be transferred to properties inside or outside the operation's perimeter since complying with the parameters imposed by law. Consequently, a FAR equal to

7.5 was adopted as effective for the lots herein. Properties whose FAR was less than or equal to the legal established one transfer their rights considering the difference between the floor area ratio and the maximum coefficient equal to 12 (twelve). On the other hand, properties with a Floor Area Ratio greater than the effective one should comply with the following rules[17]:

- if the built area is 12 times higher than the previous lot's size, owners may only transfer 60%;

- if the built area is 12 and 15 times higher than the lot's size, owners may share 40%;

- if the built area is 15 times + the previous lot's size, owners may share 20% (SÃO PAULO, 1997, art. 7).

Adopting an effective coefficient for registered properties made it possible to stipulate indexes for transferring construction potential. Otherwise, it will not be feasible to achieve, especially considering the high-rate land-use patterns in the central area and their high building template. For the formula to calculate the equivalent built area for the assignee property, legislation established as a legal coefficient the maximum factor allowed in the property's zone to receive up to 4 four) times higher than the previous land's parcel area, as we can read in the citation after. It also restricted the transfer almost exclusively to the former Z2[18] site, which covered most of the city's territory and whose coefficient was equal to one (SÃO PAULO, 1997).

> The final FAR may not exceed 4 (four) times the previous lot's area or 1.5 times the maximum legal zoning FAR, prevailing whichever was higher (SÃO PAULO, 1997, art. 7, item IV).

17. Indexes remain the same up to date. The change only affects the recipient lands parcel locations.

18. Z2 - Predominantly residential use zone with low population density. It corresponded to the urban area not included in the perimeters of the other zones, characterized by residential predominance, where commercial, service, small industrial and institutional uses were allowed. Within this zone, buildings could have a maximum FAR equal to the lot area, occupying only half of the land. In residential buildings, the FAR is twice the lot area, with a smaller lot occupation (SÃO PAULO, 1972).

Finally, concerning the registered buildings that were on lots with high occupancy rates, given the fact our analysis places TPC as a land-use tool, we see the mechanism execution failing. The transfer of construction potential to properties of historical interest must only occur in lots with FAR "leftover". After all, the core of the matter was to provide owners with some compensatory resources since they suffer from limitations imposed by heritage law. Also, such potential should be used in regions capable of incorporating it.

Exploring the case of Urban Operation City Center, we verified an inclination to adjust both the historic buildings in the context of an Urban Operation and the search for making use of a mechanism for which there was no minimum prerogative, there was effectively no egalitarian stock of construction potential among the registered properties (EMURB, 1977).

However, the properties were located within the perimeter of the Urban Operation, which only had this urban planning tool aimed at registered properties, so criteria were formulated seeking to include all of them. Despite this, the Urban Operation had submitted the receiver property to parameters related to the analysis of the transfer proposal, carrying out a certain degree of urban environmental control.

It was not clear how this evaluation was carried out nor what were the criteria for now adopting as Floor Area Ratio the index of 4 (four) times the area of the lot or 1.5 the maximum FAR of the area in which the lot is. We understand that this criterion should have been made explicit in the law to not raise doubts for the taxpayer.

In the first four years, only four potential transactions were requested outside the urban operation perimeter. In 1999, this was contested by a Direct Action of Unconstitutionality (In Portuguese: *Ação Direta de Inconstitucionalidade - ADIn*) filed by the State Public Ministry (In Portuguese: *Ministério Público Estadual - MPE*), in this Action was displayed that Municipal Law was allegedly incapable of establishing zoning norms, land use and occupation, constructive urban indexes, and other administrative limitations outside an Urban Operation boundary.

In 2000, the Court of Justice declared paragraph 1 of article 6 of law 12,349/91 (CONJUR, 2004) unconstitutional. After approving the 2002 Master Plan, this situation was overcome when conditions for selling construction potential within the urban operation were regulated. Article 220 of the 2002 Plan established that selling potential could be assigned to areas whose FAR could be exceeded. Such regions were found in bands of up to 300m along mass public transport corridors, around train and subway stations - considering a 600m ratio, and within Strategic Projects areas. However, only three transactions occurred outside an Urban Operation perimeter (considering 2015), one of which did not comply with the provisions of art. 220 (SÃO PAULO, 2004).

In the two transfer cases carried out after the approval of the master plan and which complied with the provisions of art.22, the lots were already located in highly dense areas. Therefore, the maximum FAR varied up to the limit of 2.5. On the other hand, a FAR ceiling equal to 4 for assignee lots brings few gains for cities. It comes in addition to the fact that the approval goes through analysis about urban-environmental issues.

Thus, there is a distortion in the way the instrument is operated in the recipient lot. One of the social gains by using these instruments is the chance to control densities and protect landmark historic buildings. We highlight these issues here as this argument has been scarcely discussed in studies on TDR in Brazil. The situation of the recipient lots has been hardly analyzed. As we understand that both cases need regulation and control, we believe it is worth mentioning them from an urban and an economic point of view.

The 2002 Master Plan ruled TPC only considering the transaction parameters outside the perimeter of the Urban Operation City Center, thus without changing the calculation method or the basic FAR. Procedures required for approving the transfer of construction potential have changed over time, initially, it should be carried out under technical monitoring of the work and the amounts transacted, carried out by the municipality, later this system was deactivated. The operation did not fit into the model called indirect transfer, as the public agent did not transform the development potential into titles for subsequent sale. At the Urban Operation City Center owners paid a monitoring fee to City Hall, which one was responsible to manage the bank account in which the deposits were obtained through selling & buying rights, as well as disposing of a technical team to monitor the restoration work (CIPRIANO, 2018).

In operation since 2000, with about 300 registered properties within its perimeter, Urban Operation City Center did not achieve pleasing results (Figure 5.4). The graph presented in Figure 5.3 points out the number of statements of eligibility and certificates issued in-between. It is noticeable the low demand for TPC. Analyzing Figure 5.3, we see that only statements were published; this behavior explains that TPC was a

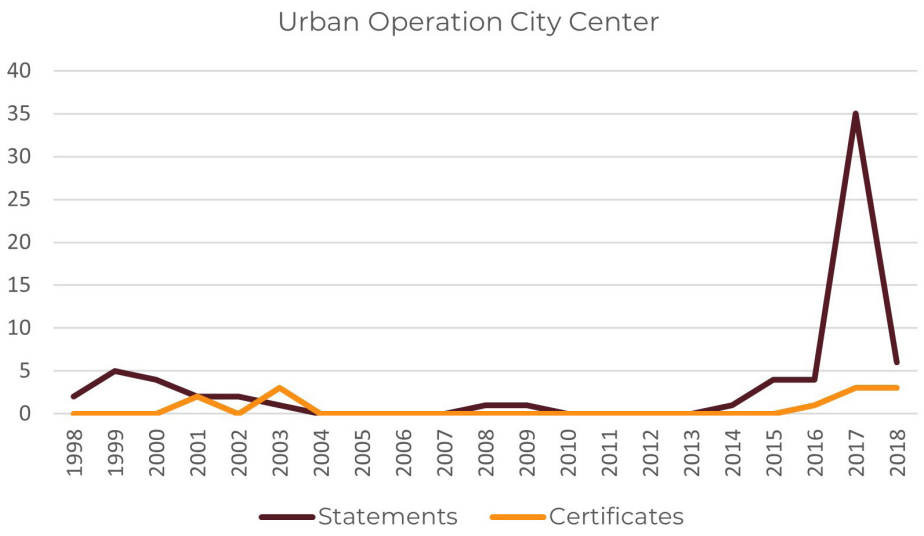


Figure 5.3
The mechanism's progress over time
Source: Prepared by Dulcilei Cipriano from the Official Gazette of the City of São Paulo data.

brand-new tool. Besides, the real estate market was not yet aware of it. It was not mandatory to combine the issuance of the Statement with the sale of development potential; hence, there were not requests for certificates in this period.

Proceeding the analysis in Figure 5.3 we can observe that the first transactions happened between 2000 and 2002. It was possible because the proposals that had already been submitted since 1998 remained under continuation while awaiting the Unconstitutionality Action's judgment. In 2003, right after the regulation of transfers outside the urban operation perimeter, the apex of the request for potential purchase occurred, and even so, it does not represent a large sum of transactions. In this same period, requests for issuing a statement decreased until reaching zero. Thus, no meaningful trade between 2004 and 2007 is worth mentioning, which can be explained by the competition between the TPC regulated in 2002

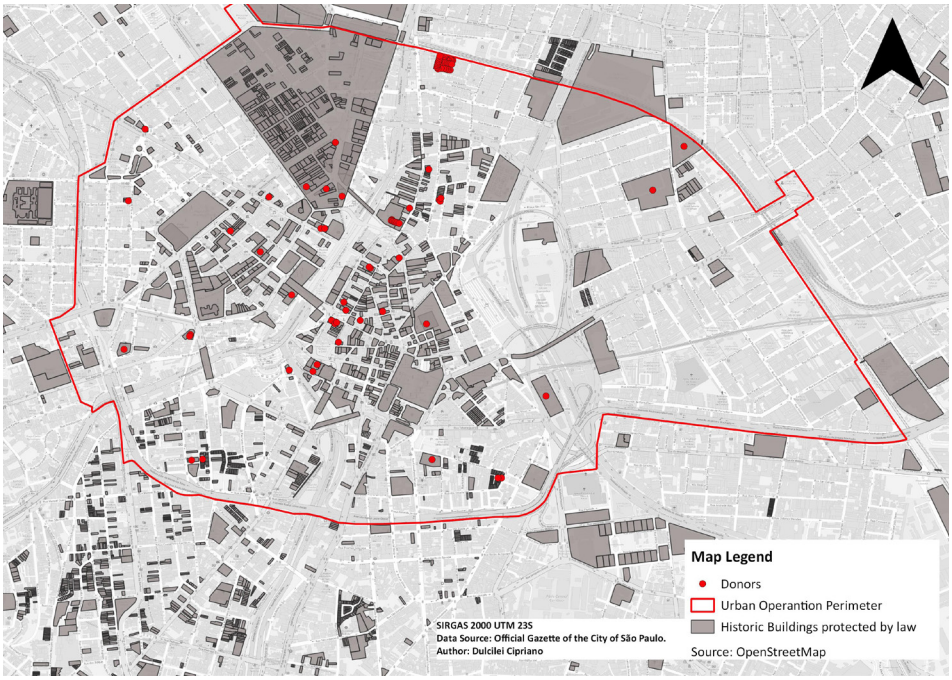


Figure 5.4 **Location of potential statements issued in Urban Operation City Center.** Source: Prepared by Dulcilei Cipriano from Official Gazette of the City of São Paulo data.

(which we will analyze later) and the Additional Building Right Levy (In Portuguese: *Outorga Onerosa do Direito de Construir – OODC*), object of another chapter analysis.

The graph analysis (Figure 5.3) shows that regulation did not contribute to an increase in transfer requests. Among the factors for the low interest in the instrument is the competition with other more advantageous tools. Another issue we should point out is the procedures for requesting the transaction of construction potential. The owner of the registered property, by 2016, should have a restoration project to kick off transfer operations and still go through long stages before obtaining complete approval for it. Considering the mechanism prerogatives in preserving built cultural heritage, such procedures were obstacles to making progress. At last, the cost of such a service should be afforded by the cash obtained through the transfer.

In 2016, a procedural norm was issued for requesting the transfer of development potential within the Urban Operation City Center (Procedural Norm N°. 59/ *SPUrbanismo*). This way, owners could strike up the transfer procedures without having to hold a restoration project in their hands[19]. In compensation, owners must present a commitment term stating that a share of the amount collected would be invested in restoration. Therefore, NP 59 contributed to speeding up statement requests. As shown in Figure 5.3, in 2016, there was a noteworthy increase in statements requests and certificate requests. In other words, after a long stagnation period, transactions were retaken. In addition to NP 59, another reason that impacted this process was the approval of the new zoning law that same year. This contributed to incentivizing the purchase of construction potential to become minimally interesting for developers.

The São Bento monastery is a pertinent example. Its restoration process remained paralyzed for seventeen years because of obstacles imposed by the Direct Action of Unconstitutionality. As a result, the monastery's restoration works turned out to be funded by donations. The transfer process started in 1998 and had not been able to complete a potential transaction until 2017. The whole process finally ended after enacting NP59. Hence, any change to the instrument's *modus operandi* must initially comprehend its operationalization before making decisions. Also, it is always required to remember that more than a single preserving land-use tool is needed to contribute economically to maintaining their meaning to cities. Building restoration needs urgency against time-passing-by, also, unfortunately, TPC can be carried out only once per property registration.

19. Resolution CONPRESP 23/2015.

Our analysis reveals that the flow of development potential in 20 years has not reached a regular course (Figure 5.5). Flow's behavior varies differently, accordingly, to changes in legislation. We understand that this behavior notifies us that development transaction has always been carried out during economic uncertainty times. Even so, at shallow levels. It should be regarded that the last two years of the analyzed period keep some regularity. However, a practical analysis from this moment shows an urban planning tool's operationalization inflection, but an effective analysis will never be performed. In 2018, the *SPUrbanismo*[20] started the negotiations to review the instrument within the Urban Operation's scope, a long-awaited procedure by society. After all, two Master Plans have already been promulgated since then, and the mechanism remains intact.

20. *SPUrbanismo* is a municipal autarchy responsible for the implementation of São Paulo City urban projects.

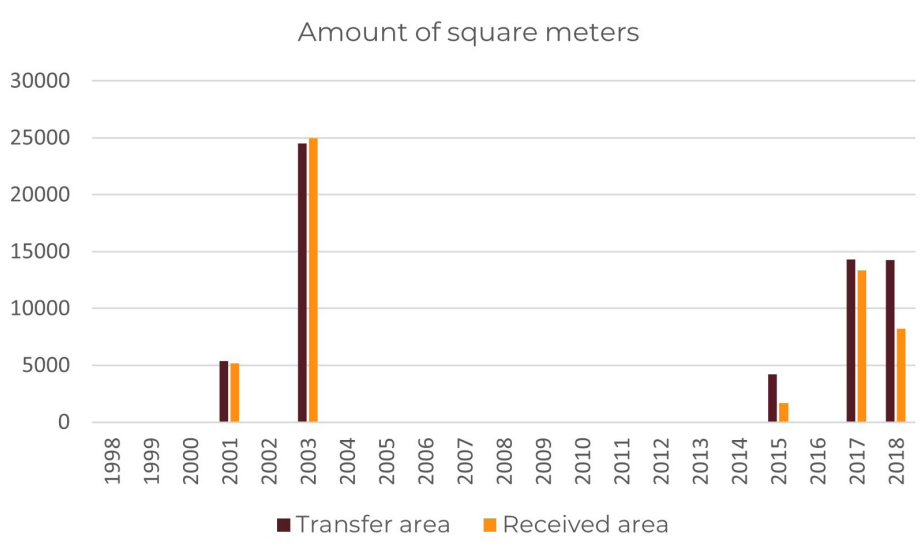


Figure 5.5
Analysis of the square-meter transactions, considering the date of publication in the official gazette
Source: Prepared by Dulcilei Cipriano from Official Gazette of the City of São Paulo data.

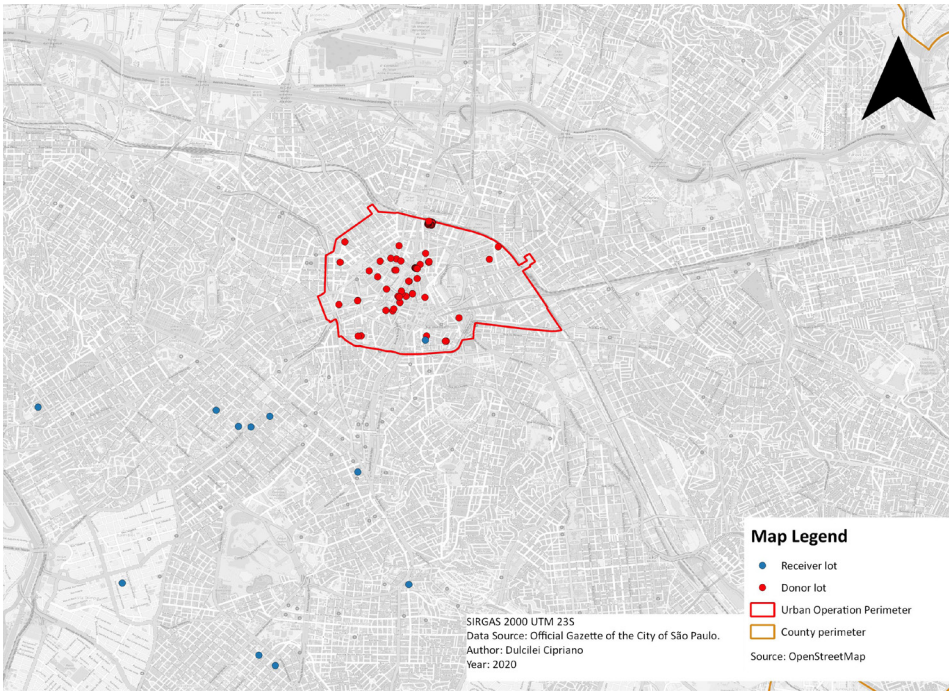


Figure 5.6
Spatial visualization of transactions within the Urban Operation City Center
Source: Prepared by Dulcilei Cipriano from Official Gazette of the City of São Paulo data.

The urban planning tool accordingly to 2002 Master Plan

In 2001, the *Estatuto da Cidade* institutionalized the so-known TDC into the legal system, leaving each municipality in charge to specify how the device would be framed by their master plans. Thus, in the 2002 São Paulo Master Plan (Law 13,430/2002), the instrument could be legally applied to three more cases in addition to ZEPEC-registered properties (unlike urban operation's guidelines). With that, the built cultural heritage's differential in owning an instrument dedicated only to this matter scaled down.

The mechanism regulated in the 2022 Master Plan allowed owners to transfer the difference between the existing construction potential used (used FAR) and

the maximum construction potential (maximum FAR). Areas subjected to receive construction potential were those whose basic FAR could be exceeded if they were within the Urban Intervention Areas, in the ranges of up to 300 meters along the mass public transport corridors and located within a 600 meters ratio away from train and subway stations already in operation (Law 13,430/2002). In addition, the legislation restricted the maximum cumulative potential per transfer to 50% of the basic FAR concerning the recipient property.

The zone that most transferred and received development potential was the ZM-3b, as shown in Figures 5.7 and 5.8, a high demographic and density mixed-zone with residential use as a reference. ZCP-b27[21] was the second zone to receive the most significant number of construction potential, having the same basic FAR parameter as the first one. We understand ZCP-b27 was a second option because it does not have a markedly residential characteristic. Although we have not found legislation guidelines regarding the use of the receiving lot, a large share of the transactions was carried out within zones like those. The predominance in

21. Polar centrality zones (Portuguese: *Zonas Centralidade Polar*) – zones destined for the location of activities characterized by the coexistence between non-residential uses and housing, predominantly non-residential uses (SÃO PAULO, 2004).

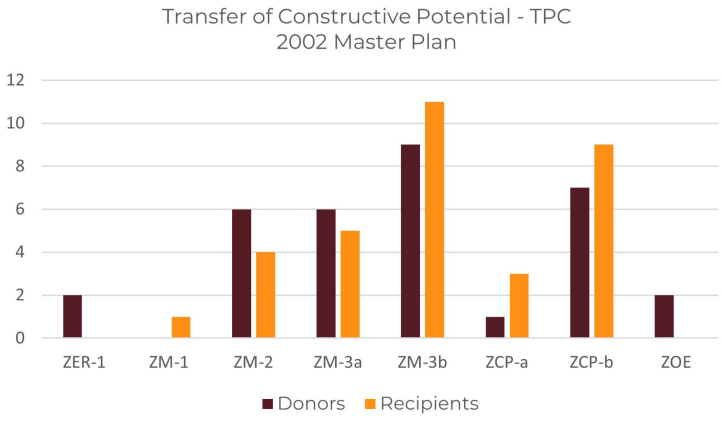
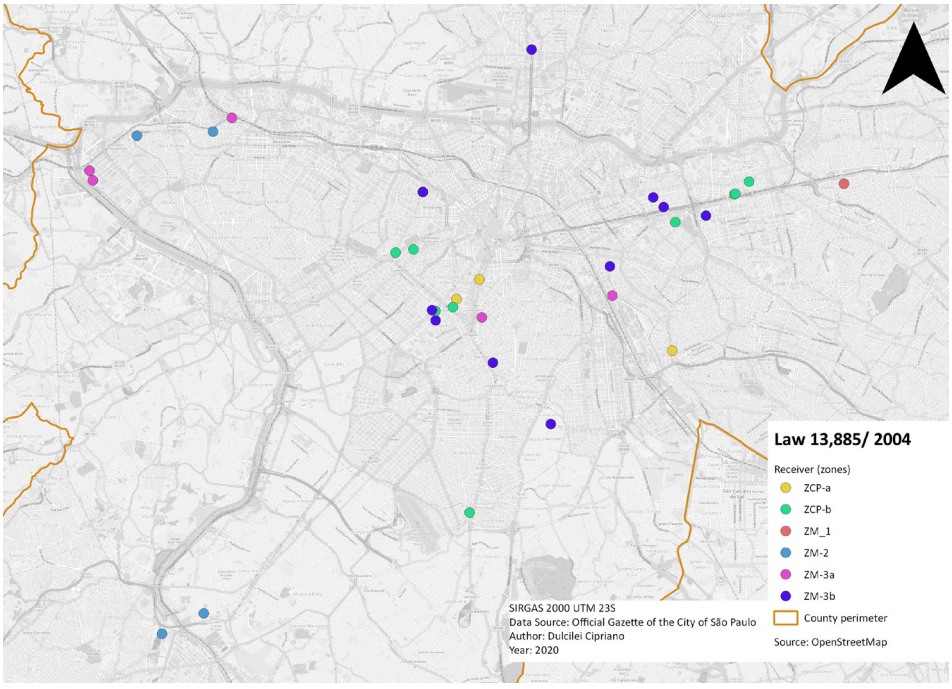


Figure 5.7
Analysis of potential development transactions by zoning types accordingly with the 2002 Master Plan and 2004 Zoning Law
Source: Prepared by Dulcilei Cipriano from the Official Gazette of the City of São Paulo data.

highly dense zone demonstrates limitations to fulfilling one of urban planning tools' primary objectives. In other words, which is to promote an increase in density in areas capable of supporting densification by measuring TDR accordingly to regions covered by public transport.

The indexes by zone related to registered properties (donors) follow the same as the recipient's lots where ZM-3b holds the highest number of declarations issued, as ZCP-b zone-type comes right behind (Figure 5.9). However, as the two FARs are equal to 2, we must consider the value of the assigning lot. We do not have this data now, unfortunately. In holding this data, we would define whether the exchangeable potential would be greater or less, configuring gains for the registered property owner. According to our brief mathematical simulations, if the land value of the donor property is lower, its FAR must

Figure 5.8
Location of issuance of certificates of construction potential in the 2002 Master Plan and 2004 Zoning Law.
Source: Prepared by Dulcilei Cipriano from the Official Gazette of the City of São Paulo data.

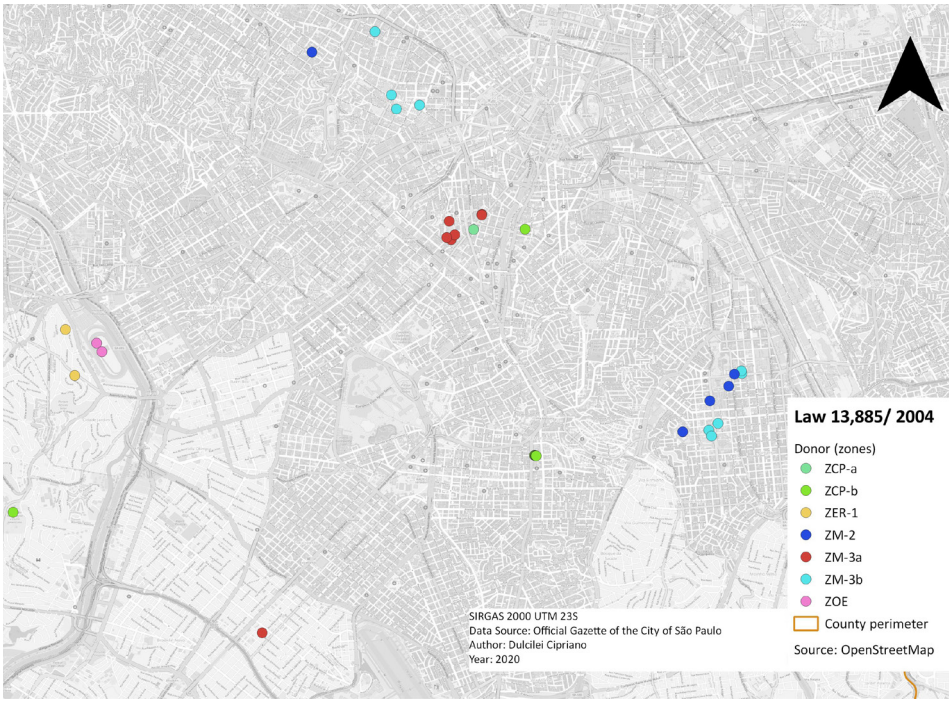


be higher so that the equivalent built area transferred is advantageous to those who are going to receive rights. Therefore, in both cases, zoning is not the only factor to be taken into consideration.

In general, the mechanism application reflects the economic demands of the civil construction sector during a period. In Figure 5.10, we can see the interest peaks, reaching their maximum, in 2012. This specific occasion was originated by an owner that requested several statements for its properties, already having a buyer for the potential issues, which were not the object of the restoration's project/work[22] until now. Learnings are that such a request may have gone through a combined

22. It was researched in the Official Gazette of the City of São Paulo. Unfortunately, we did not find restoration processes concerning this address in question.

Figure 5.9 **Location of issuance of statements accordingly with the 2002 Master Plan and 2004 Zoning Law.** Source: Prepared by Dulcilei Cipriano from data from the Official Gazette of the City of São Paulo.



sale. Hence, the concern in transferring construction potential reveals the security feeling about immediately negotiating the development potential. This case differs from most of the issued statements, which await a potential buyer for years. Still, referring to the combined sale, it should be noted that the urban planning tool was reached by a real estate developer whose company had been in the market for only one year[23]. Besides that, his land parcels remain unbuilt[24].

The data analyzed show that the growth in the demand for certificates was pro-cyclical (Figure 5.10), meaning it was an indicator of the overall state of the economy. We can observe that certificate issues have considerable activity from 2007 to 2015. The variations followed the economic activity in the same period, as its most significant peaks occurred between 2008 and 2013, following the civil construction boom in Brazil. The analysis also shows us a considerable drop from 2013 to 2015, contrary to municipality representatives' say in lectures and seminars. They remarked that demand for the instrument had increased in 2014, as the Additional Building Rights Levy was too expensive that year. However, our analysis considers the issuance year, not the certificate requesting year. This may be the focus of the drop in the period mentioned above, as some processes initiated in 2014 only had their certificate issued two or four years later.

Although the issuance of construction potential statements began in 2003, the first transaction of TPC in the context of the 2002 Master Plan occurred only in 2008 (Figure 5.11). Confirming what we said before, the construction potential transaction only took place in the period in which civil construction was experiencing its heyday, five years after the owner of the listed property had obtained its statement of construction potential.

23. Most of the statements were buoyed by companies that have not been in the market for approximately more than 10 (ten) years.

24. It was verified in Google Maps that the lot currently has a sales center. Accessed on May 10, 2020.

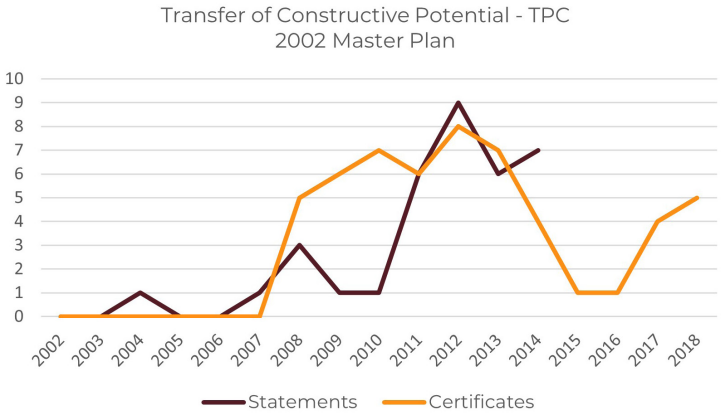


Figure 5.10
Analysis of the instrument's progress accordingly with the 2002 Master Plan
Source: Prepared by Dulcilei Cipriano from Official Gazette of the City of São Paulo data.

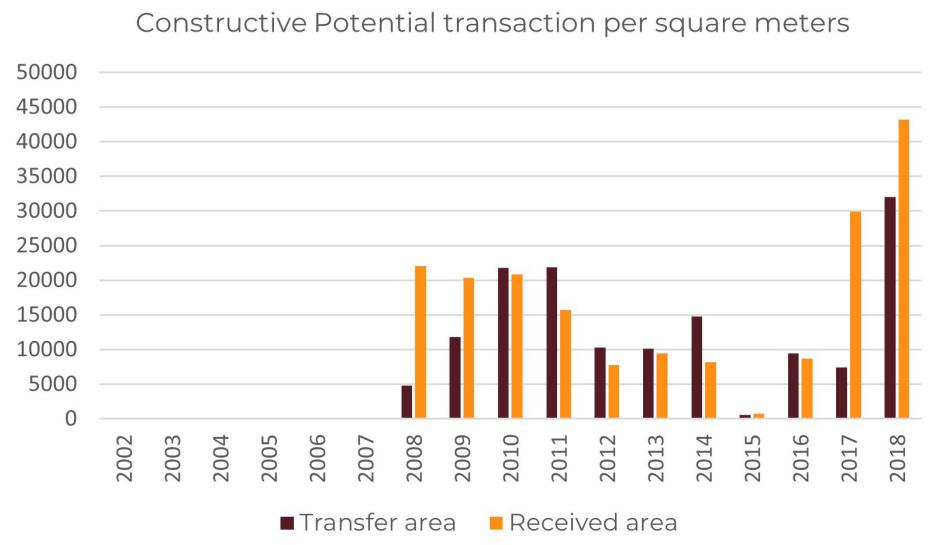
From a perspective of a heritage property owner, a five-year period is an extended interlude to waiting for a benefit that would contribute to the restoration work. We generally adopt a 10-year period as a usually acceptable interlude[25] of conservation works, so, in five years it would be halfway through its useful life. Or worse, in five years, a property that was initially in good condition could have reached a bad or very poor state due to several factors. Among the most common elements that could affect properties in the city of São Paulo, we point out pollution, acid rain, and electrical discharges.

Based on the data researched, we observed that TPC in the 2002 Master Plan had its operationalization concentrated in the last six years of the law validity, during a favorable economic period for the Brazilian construction sector. We asked how the instrument would have behaved in another economic cycle. Concerning our analysis of the transfer within the Urban Operation's scope, such an answer would be the same order as the analysis previously carried out, if not worse, considering the calculation method, the FARs, and the lot market values outside the municipality city center.

25. Taking as a reference the researcher previous experience at Heritage Municipality Department (in Portuguese: *Departamento do Patrimônio Histórico - DPH*) and at National Heritage Institute (In Portuguese: *Instituto do Patrimônio Histórico e Artístico Nacional - IPHAN*).

At last, in the mechanism analysis under Law 13,430/2002, we pay attention to Figure 5.11., more specifically, for the year 2018. This year presents a high quantity of square meters negotiated based on the TPC processes initiated in 2002 and concluded only after enacting the new 2014 Master Plan (Law 16,050/2014). Therefore, we bring up the following questions: What would have been the advantages of postponing for 4 (four) years executing the potential transaction? Is the real estate market waiting for an increase in the market value of the recipient lots? Would this behavior have been affected by competition with another instrument?

Figure 5.11
Analysis of potential transaction per square meter in the 2002 Master Plan and 2004 Zoning Law
Source: Prepared by Dulcilei Cipriano from data from the Official Gazette of the City of São Paulo.



TDC ACCORDINGLY WITH THE 2014 STRATEGIC MASTER PLAN

Law 10,257/2001 in Paragraph 3, section 40 determines that the Master Plan must be reviewed every 10 years. The goals are to evaluate their performance and reformulate municipal urban policy priorities. Therefore, in 2014 the urban tool planning underwent changes, from TPC, turned out to be designated as a TDC, the precise definition used in the *Estatuto da Cidade* (2001). The main changes were new formulas for calculating the transfer and billing methods. Another difference worth mentioning was transferring rights to owners proving be incapable of affording restoration projects. Law determined that entitled owners must sign a commitment term ensuring the money will be exclusively used to maintain their registered property in good condition.

The mechanism alteration brought incentive factors to benefit owners with small-sized land since the instrument is now considering the lot area's size (no longer its air's development potential), as was done in the TPC. Therefore, the smaller the lot's size, the greater the incentive. Despite these innovations that search to improve the conservation and preservation of the registered property, the law restricted 12-month transactions to 5% of the Urban Development Fund (In Portuguese: *Fundo de Desenvolvimento Urbano - FUNDURB*) collected in the same period. Such a condition appears as a barrier to small landowners. A large-sized listed lot can use this percentage at once, thus reducing the possibility of the small landowner carrying out the deal.

The TDC also improved the tool application regarding the recipient lots. Such improvement consists of establishing social and planning factors[26] for encouraging or discouraging densification in certain city areas due to the existing infrastructure. Another implementation to consider is that the certificate can only be issued upon proof of the conservation certificate. Or by concretely ensuring that entitled properties will be restored with money obtained by transactions (SÃO PAULO, 2014).

Despite the measures that were implemented seeking greater control of densification, in the tool's first four years, Urban Transformation Structuring Axe Zone (In Portuguese: *Zona Eixo de Estruturação Urbana - ZEU*) was the section most benefited from receiving transfers (Figure 5.12). This section is highly populated and densified, then the least suitable areas for densification. At this point, we must consider: What gains does the municipality seeks by making the transfer available to fields that, in theory, are the least suitable for receiving densification? Since the legislation allowed every lot, whose maximum FAR is greater than 1 (one), theoretically, low-densified zones cannot receive a transfer from TDC, such as the Corridor Zone (In Portuguese: *Zona Corredor- ZC*).

As discussed earlier, based on the 2002 Plan, areas surrounding public transport infrastructure did not affect as a target for receiving transfers. However, it is crucial to keep such areas as a target instead of allowing transactions for the whole city, as permitted in the 2014 Plan. Beforehand, TDC has been passed over due to other mechanisms for not contributing financially to the public treasury (although it is not our role to analyze how other land-use tools are performing). Here, it is compelling to regard such an instrument from a landmark property's point of view. If Municipality does

26. Social Interest Factor (Fs) to calculate the financial contribution value corresponding to charging the Additional Building Right Levy (In Portuguese: *Outorga Onerosa do Direito de Construir – OODC*) (Law N°. 16,050/2014).

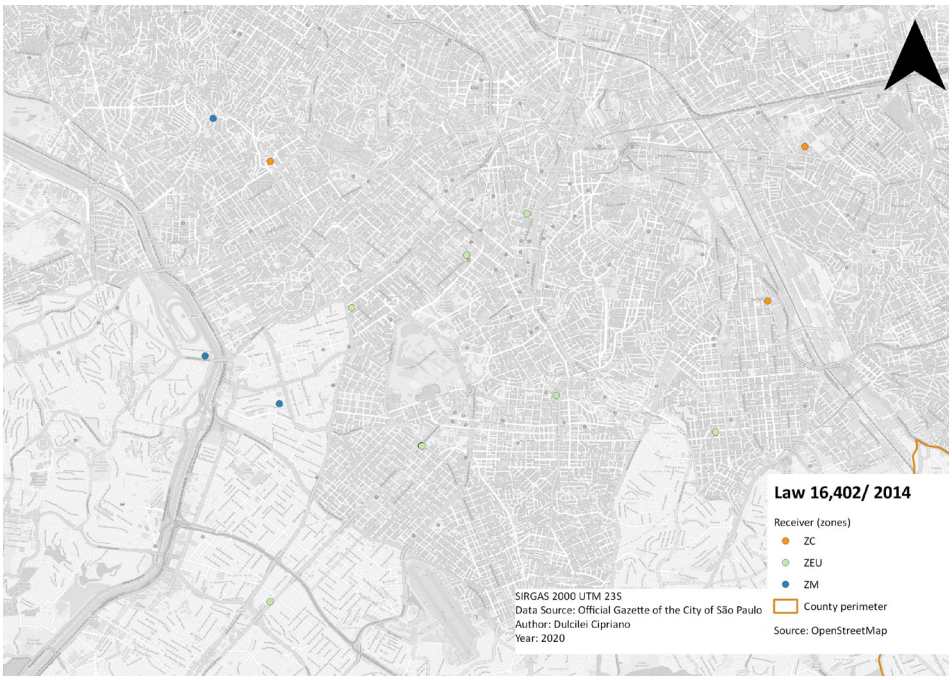


Figure 5.12 **Location of issuance of certificates accordingly with the 2014 Master Plan and 2016 Zoning Law.** Source: Prepared by Dulcilei Cipriano from data from the Official Gazette of the City of São Paulo.

not prevent the device from achieving its effectiveness; as a result, there's no sense in keeping it functioning in the way it has been applied.

Considering the instrument came into effect in the second semester of 2014, we chose to start analyzing from 2015 onwards. Figure 5.13 indicates that the tool initially had a high demand for interest, experiencing a sharp drop in the subsequent year (2016). Soon after, it recovered to being moderately attractive for two years in a row. The high rate of issuance of declarations in 2015 is due to the request for the instrument by a village's dwellers that own 49 properties. The several transactions were justified because the TDC equation was different, and the incentive factor was equal to 1(one), which was affordable only if requested by various properties simultaneously, due to lot size. The other requests for statements in the same year belong to properties whose

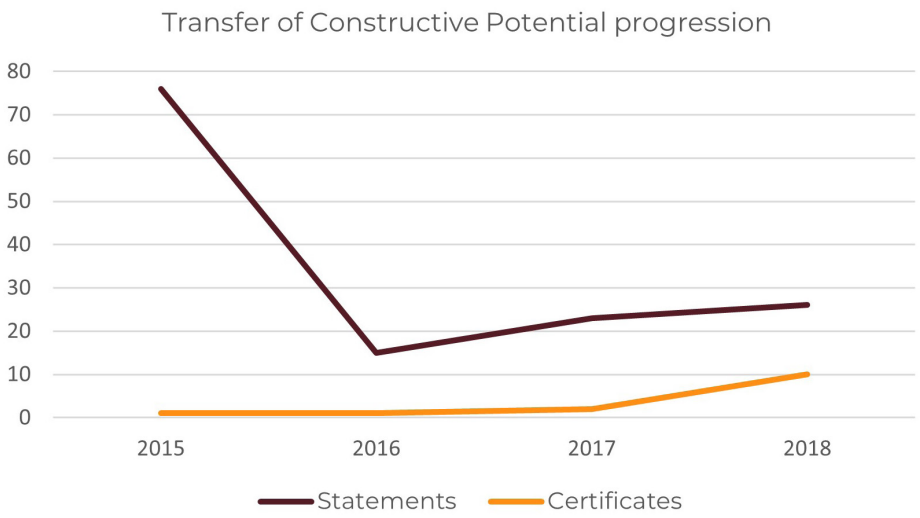


Figure 5.13
Analysis of the instrument's progress in the first years of the 2014 Master Plan.
Source: Prepared by Dulcilei Cipriano from the Official Gazette of the City of São Paulo data.

lots have dimensions above 10,000 square meter. For these, the incentive factor equal to 1(one) proved to be worthwhile (Law N°. 16,050/2014).

The issuance of declarations decreased considerably after 2016 when the Zoning Law (in Portuguese: *Lei de Uso e Ocupação do Solo - LPUOS*, Law 16,402/2016) was established (Figure 5.14). It was also when the new incentive factors came into force - variable depending on the land area covered. Wherefore, suppose the *Normandia* Village properties had waited for the Zoning Law, for example. In that case, it would have obtained a higher transferable development potential value. After all, the most significant incentive factors began being granted to the smallest lots. Thus, the legislation contributes more expressively to medium and small-sized properties by launching incentive factors, representing the most significant percentage of listed properties. After 2016, requests for declarations resumed their growth, although growing at a moderate pace.

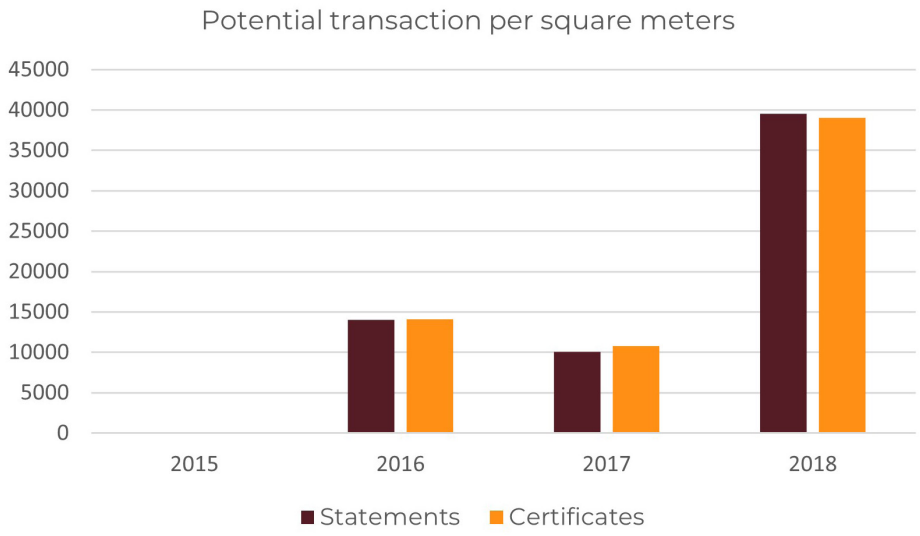


Figure 5.14
Analysis of the potential transaction per square meter in the Master Plan 2014/ Land Use and Occupation Law 2016
Source: Prepared by Dulcilei Cipriano from the Official Gazette of the City of São Paulo data.

Despite limitations imposed on the value of TDC to 5% of the total collected by FUNDURB considering the last 12 months, even so, owners with lots greater than 5,000 square meters were the ones who accomplished the most transfers in the period's object of this research. We can see this by checking the number of square meters traded from 2014 to 2018 (Figure 5.14). Furthermore, considering that the issuance of certificates began after 2016 (Figure 5.13), the number of requests shows that interest in potential development acquisitions has grown compared to previous versions of the instrument.

It is still too early to classify TDC as an instrument that can protect the cultural heritage built in São Paulo. The first year's analysis points to greater interest in the owners of registered properties and real estate developers. First, however, the number of listed properties in the Municipality that got protection is still negligible. It demonstrates that the instrument alone cannot provide the needs that the built heritage has. We must consider many factors to safeguard landmark-built heritage. Due to its specificity, the tool no longer fits as an ideal mechanism to protect the registered property, as landmark property needs constant maintenance.

THE MECHANISM IN ITS THREE PHASES
BRIEF COMPARATIVE ANALYSIS

To better understand the mechanism, we have conducted comparative studies to find out how it works in its three phases of implementation. First, we will analyze how the TPC behaved by comparing the scope of the City Center Urban Operation with the model implemented by the 2002 Master Plan. Later, we will study the device when the plan was reviewed in 2014 to verify how the implementation of the TDC affected the transfer of the building rights of the City Center Urban Operation in the first four years. We believe that this comparison, although brief, is necessary to assess the degree of competition between the different modes of implementation. Thus, it has had an impact on the functioning of the mechanism.

For this purpose, we first compiled the formulas for the implementation of the device in its three periods of operation. Then, we decided to list in Table 5.1 all the procedures that were applied within the scope of the 2002 Plan, since the equation was modified when the Zoning Law (LPUOS) was passed in 2004. The result of the survey is the legislation presented in Table 5.1, which shows the historical evolution of the instrument through its formulas.

At first, we observe that the tool formula within the Urban Operation framework was the same, or nearly so, as the equation adopted in the 2002 Master Plan / 2004 LPUOS. As in the Master Plan, there was a formula to discount the built-up area; in Urban Operation, ranges of FAR delimited the percentages allowed for the development potential that could be transferred.

Table 5.1 **Formulas adopted according to the legal framework**
Source: Municipal Law nº 12,350/1997, Municipal Law nº 13,430/2002, Municipal Law nº 13,885/2004 and Municipal Law nº 16,050/2014. Tabulation: Elaborated by Dulcilei Cipriano.

City Center Urban Operation	2002 Master Plan	LPUOS 2004
ACe = (VTp/VTc) x (CAc/CAp) x PCpt	ACr = VTc/CAc x CAr/VTr x ATc	(1) ACr = (VTc/VTr) x (CAr/CAc) x PCpt (2)* PCpt = (ATc x CAc) - Ach
ACe: an equivalent built area for the donor property	ACr: built-up area equivalent to being received	ACr: built-up area equal to be received
VTp: the value of the square meter stated by the Generic Plant of Values	VTc: value of the square meter of the donor land, determined in the Generic Plant of Values	VTc: value of the square meter of donor land, determined in the PGV
VT: the constant value of the square meter by the Generic Plant of Values	VTr: value of square meter of recipient terrain determined in the Generic Plant of Values	VTr: value of the square meter of recipient land determined in the PGV
CAc: maximum FAR according with the recipient land zoning-use	CAr: FAR of the recipient terrain	CAr: FAR of the recipient lot
CAp: 4 (four) = utilization coefficient of the land adopted in Urban Operation for cases of transferring development potential	CAc: coefficient of basic use of the donor land	CAc: basic FAR of the donor land
PCpt: transferable construction potential, in square meters	ATc: area of the donor land.	PCpt: FAR of the donor land that can be moved to the recipient land
		ATc: area of the donor land
		Ach: area built on the donor lot to be subtracted from its development potential
		* § 1º, Art. 26 - The PCpt when there is need to discount the portion of a built area existing in the property is now calculated by the following formula.

2014 Master Plan	LPUOS 2016
(1) PCpt = ATc x CAbas x Fi (2)** PCr = (PCpt x VTcd) / (Cr x CAmáxcd)	
PCpt: development potential that can be transferable	Art. 24. In the issuance of new statements of development potential that can be transferable to properties framed as ZEPEC. According to article 125 of Law N°. 16,050, of July 31, 2014 – Master Plan, the following Incentive Factors will be applied (Fi):
ATc: area of the donor land	I. 1.2 for properties with a plot area of up to 500 square meters
CAbas: basic FAR of the donor lot, in force at the reference date	II. 1.0 for properties with a plot area of more than 500 square meters up to 2,000 square meters
Fi: Incentive factor = 1, and after approval of Law 16,402/2016 ranging from 0.1 to 1.2	III. 0.9 for properties with a plot area greater than 2,000 square meters up to 5,000 square meters
PCr: development potential equivalent to be received in the recipient property	IV. 0.7 for properties with a plot area of more than 5,000 square meters up to 10,000 square meters
VTcd: unit value, value per 1m2 (one square meter), of the donor land to the Land Value Register for the charging Onerous Grant in force on the reference or donation date, as stated in the declaration issued by the Municipal Department of Urban Development	V. 0.5 for properties with a plot area greater than 10,000 square meters up to 20,00 square meters
Cr: unit value, value per 1m² (one square meter), to consider charging the onerous grant in the recipient property	VI. 0.2 for properties with a plot area greater than 20,000 square meters up to 50,000 square meters
CAmaxcd: Maximum FAR of donor lot, in force on the date of reference or donation, as stated in the declaration issued by the Municipal Department of Urban Development. In cases where the development potential can be transferable without donation, the equivalent development potential to be received in the recipient property (PCr) will be calculated by adopting the maximum FAR of the donor property (CAmaxcd) equal to 4 (four).	VII. 0.1 for properties with lot area exceeding 50,000m square meters
* Equation for obtaining development potential allowed to transfer.	
** Equation for obtaining potential to be transferred to the recipient property.	

continuation
Table 5.1
Formulas adopted according to the legal framework
Source: Municipal Law nº 12,350/1997, Municipal Law nº 13,430/2002, Municipal Law nº 13,885/2004 and Municipal Law nº 16,050/2014.
Tabulation: Elaborated by Dulcilei Cipriano.

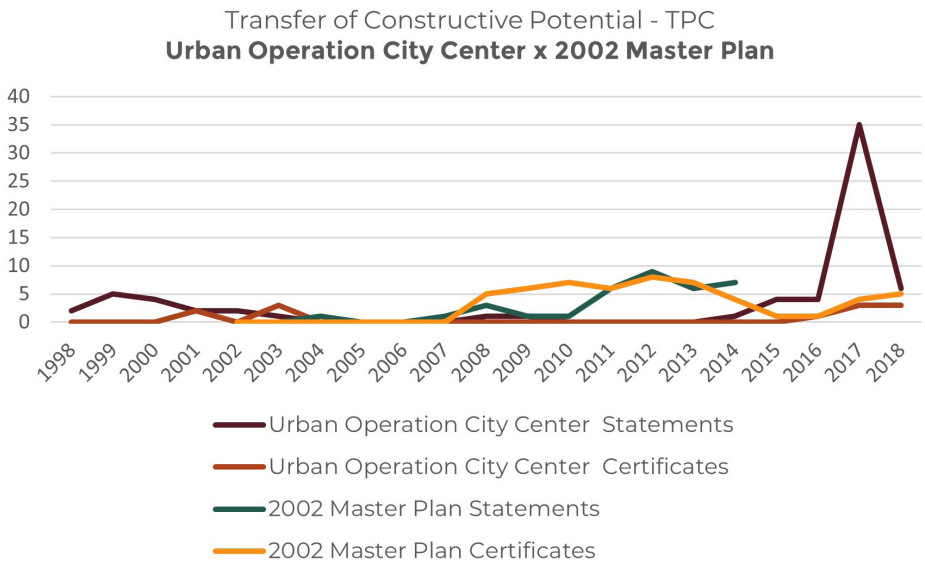


Figure 5.15 **Comparative analysis considering the Urban Operation and 2002 Master Plan** Source: Prepared by Dulcilei Cipriano from the Official Gazette of the City of São Paulo data.

In the Urban Operation, FAR is the built-up computable area (SÃO PAULO, 1997a). To obtain the transferable FAR (PCpt), the value of the land area and the FAR established in one of the ranges provided by law is multiplied. Initially, to classify the property in the FAR ranges granted by Law 12,349/97, owners must register the effective development potential. This is given by dividing the computable area by the plot area.

The device functioning within the Urban Operation's scope proved to be advantageous. However, Figure 5.15 attests that the transfer of development potential in 2002 was considerably higher in demand. Assessing the flow of certificates issued between 2007 and 2013, despite smaller gains with the 2002 Master Plan equation, developers opted mainly to use the instrument outside the City Center Urban Operation perimeter. In our understanding, the procedures were faster in this way, and the control was less restrained. It is worth mentioning

that, in the Urban Operation, there was, and remains, the issue tangling project approval in the receiving lot. Until 2016, the transfer was subjected to owners having a restoration project.

In 2014, a new equation was adopted for the tool application. Forthwith, there is a formula for the registered asset (donor) and another for the recipient. In the first, an incentive factor for each square meter of land was adopted to benefit small-sized landowners. Concerning the recipient lot, there was also a change in how to calculate. In 2002, the master plan used the value set out in the Municipal Land Value Plan (In Portuguese: *Planta Genérica de Valores - PGV*). Currently, the land value tends to reproduce market values to charge Additional Building Rights Levy matters.

Figure 5.16 shows that the TDC in 2014 has been the object of great interest, especially compared to the initial execution period in the 2002 Plan. Changes done to the equations proved to be engaging for both owners and developers. As a result, requirements imposed on carrying out the deal do not constitute barriers to making the tool succeed.

When we compare the early years of TDC with the transfer mechanism in the City Center Urban Operation in the same period, we observe the most significant quantity of declarations issuance for the urban operation occurred in the first years (Figure 5.17). This is an effect caused by the approval of the new Master Plan in 2014 when the São Paulo Historical Heritage Department (Resolution N°. 23/2015, in Portuguese: *Departamento do Patrimônio Histórico - DPH*) established guidelines for granting benefits and incentives. By working together with the 2014 Master Plan guidelines, this resolution

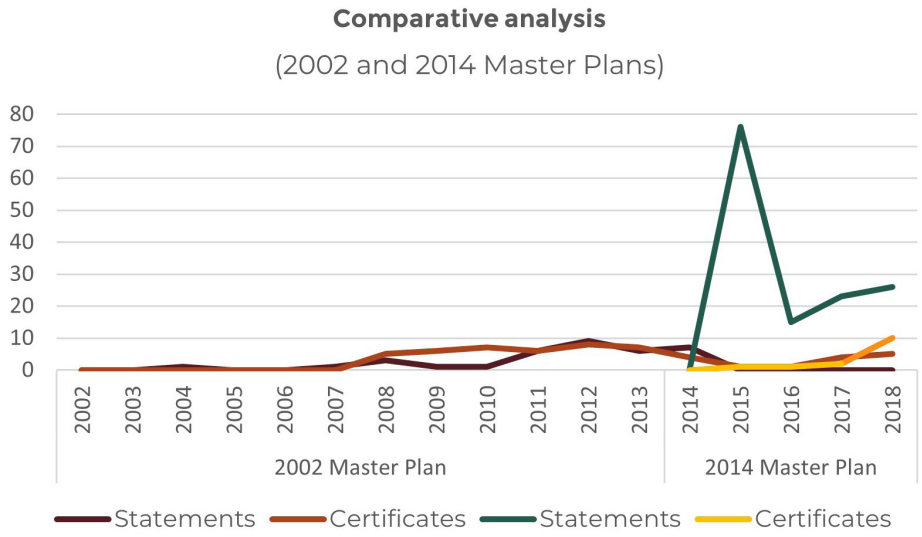


Figure 5.16
Comparative analysis of the mechanism in the 2002 and 2014 Master Plan
Source: Prepared by Dulcilei Cipriano from the Official Gazette of the City of São Paulo data.

became a reference for NP 59. Furthermore, it helped operationalize the tool within the urban operation. NP helped streamline the benefit procedures, providing those gains were passed in time for owners to afford the restoration project.

We also associated with NP 59 the considerable increase in issuing of transfer declarations in 2017. First, due to the chance to owners use the resource to engage in the restoration project. Second, due to the more agility in proceedings. Third, finally, because the company is no longer the manager. This enables the entrance of third parties into transactions. These third parties have played the role of disclosers of the mechanism regarding owners who had no knowledge about this matter. However, concerning issuing certificates within Urban Operation's scope, the new standard proceedings did not enhance competitiveness against the TDC tool ruled by the 2014 Plan.

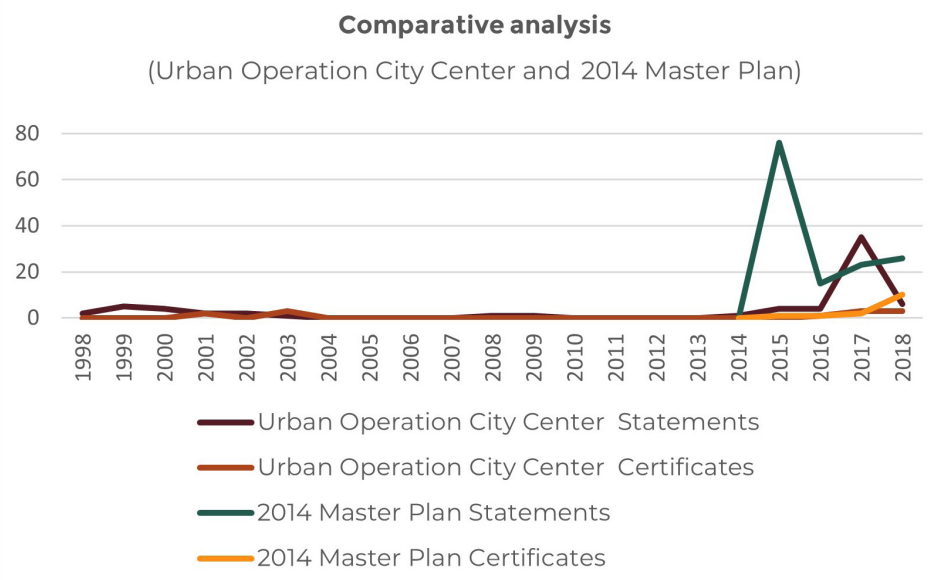


Figure 5.17
Comparative analysis: Centro Urban Operation and the 2014 Master Plan
Source: Prepared by Dulcilei Cipriano from the Official Gazette of the City of São Paulo data

When we look at the comparative analysis between the three phases, we find that the mechanism introduced by City Center Urban Operation is not competitive compared to its counterpart in the 2014 Master Plan. Although NP 59 has contributed by providing smarter operationalization procedures, the tool remains unattractive for developers to make profits from selling additional development potential. However, if greater control of city operations and the absence of the 2002 Master Plan implies an imbalance between supply and demand, the new equation and its parameters are undoubtedly more effective for executing the potential development transaction.

FINAL CONSIDERATIONS

In this chapter, we attempt to assess the effectiveness of the urban planning tools of Transfer of Construction Potential and Transfer of Building Rights over the twenty years of its existence. We cover the tool's conception and evolution to protecting the culturally built heritage in São Paulo.

First, we examined the mechanism used in New York and try to compare it with the version used in São Paulo. This comparative approach has shown us that the TDR for Landmarks Sites is not a tool commonly used by New York developers to go beyond the basic requirements of the city FAR.

In both cities, such tools compete with other land use tools. In the case of New York, however, the competing instruments are more permissive and less controlled by the city government than in São Paulo. Moreover, sales in São Paulo and New York are mainly for residential and commercial purposes, respectively.

Operationalizing the TDRs proved to be one of the obstacles to success. However, we recognize that greater operational control is necessary because it helps to preserve the built heritage according to the social function of the property. In São Paulo, TDC control was put into practice after the approval of the 2014 Master Plan. Until now (2021), it is not an obstacle to the effective transfer of rights.

Further investigation of the New York case was hampered by the difficulty of accessing the data electronically. This access was not facilitated by the city government. Therefore, we could not effectively verify how the transactions were carried out to compare them

with the mechanism used in São Paulo. Nevertheless, we obtained data that provide for transactions up to 10%, a value comparable to that of São Paulo, as in the literature studied.

We understand that a decisive comparative analysis is crucial to having access to the primary data of Transfer Developments Rights in NYC. It would help to compare each of the three phases of the São Paulo mechanism and its application variants. Unfortunately, we also lacked the time to obtain all the material needed. Despite that, our research process was competent enough as a basis for a comparative understanding.

Investigating the mechanisms in São Paulo also faced problems with the data availability. We believe that this is also one of the obstacles to the success of the mechanism because the lack of information discourages competition. And without competition, there is no market. In addition, the inaccessibility of data affects not knowing which region has the greatest development potential and the benefits of selling and acquiring development rights. We believe that the availability of data, especially in spatial form, would stimulate competition. It would also allow us to assess how profitable TPC and TDC are compared to other instruments.

In 2018, the City of São Paulo began promoting data transparency in TDC transactions through a database published in a PDF file indicating the amount of potential development available at any given time. This is progress. However, we believe that the data should be fully released to public affairs for better understanding. In addition, the data needs to be from the first transaction to the last so that the flow of the transfer processes can

be analyzed. In this way, it is possible to understand how effectively the mechanism works. It might even be possible to compare it with other instruments to see which offers the more significant benefits.

We have also noted that interest in purchasing development rights generally follows fluctuations in the construction market. In other words: When economic activity is high, there is greater demand. On the other hand, in the years that followed legislative changes, there were more outstanding issues of development rights. We explain this with more disclosure of the instrument (through official municipal media) or through third parties approaching registered landowners. As well as the fear of owners who are already aware of the issue of legislative changes that could reduce their income.

All in all, we can conclude that the interest in selling development rights continues. During the three phases we analyzed, it became clear that registered property owners have an increased interest in selling rights to subsidize maintenance costs. Or simply to compensate for a burden they believe they can afford. In the first case, owners usually have someone in mind to who they want to sell the rights. In other cases, the owners have already been informed that they can receive such benefits to fund their restoration work. And second, there are these types of owners who are up to date on changes in the law. They are looking for simple compensation to mitigate their “misfortune” of owning a registered property. In this case, development rights are only traded when owners feel the profits are high enough to get into this type of business. Currently, there is also a third type of owner. As a rule, they are indirect stakeholders who inform unsuspecting owners of their right to such an advantage.

The analysis of the mechanisms has shown that the period between the submission of the declaration of potential and the sale was very long. This is a setback, since it is a mechanism that should promote the preservation of the built heritage. Nevertheless, we find that the completion of the potential sale process occurs on average within two years, enough time to carry out a small restoration. Usually, the work can be financed with the amount generated by the transfer. One of the reasons for such a delay is the challenge for the government to make the mechanism dynamic. Other factors worth mentioning are when the sale of rights is canceled due to non-compliance. There are also cases when the process is canceled or when changes in the company require the revocation of certificates, etc.

We have also noted that the implementation of a study involving the transfer of constructive potential in the context of City Center Urban Operation has led to analyzing this tool always in comparison with that practiced in the master plans. And as much as it has currently approached the parameters established by 2014 Master Plan, we still believe that its evaluation is more effective when separated from a general context of the mechanism, that is, the instrument practiced in Urban Operation should not be part of a general study, as it has its own specificities.

Considering the analysis carried out, we conclude that, in the context of the Urban Operation and the PDE 2002, the TPC instrument did not contribute to the conservation of built cultural heritage. Most owners who managed to carry out transactions had to wait at least five years to get the money. It is an unworkable timeframe for a benefit that aims to help buildings not to deteriorate over time. However, considering the first years of the

2014 Master Plan, data showed that selling TDR had a more favorable performance than the previous ones. Even though demand for buying development rights is still lower when considering supply.

As a result, we conclude that this mechanism must have its action coupled with another form of benefit, as the potential transaction is somewhat limited. Therefore, it will never be possible to maintain the state of conservation of a protected property only with the amount arising from the transfer. The preservation of the built heritage through tax incentives and benefits should not only be done through only one urban planning tool. In our understanding, it must start from the effort of a more comprehensive plan.

Finally, we believe that the Municipal Secretariat of Culture and the Municipal Secretariat of Housing must implement a program aimed only at registered properties located within the perimeter of the urban operation. In other words, an urban operation is not the correct tool for that region. We understand that the biggest problem is not the mechanism but the larger context in which it was applied. Concerning TDR outside the urban operation perimeter, City Hall should delimit “reception” areas subject to densification and then provide incentives to make them attractive to developers. Thus, seeking to increase interest in TDC and contribute to city planning. Finally, for the instrument, we thought it would be helpful to define deadlines for potential transactions to sidestep impediments.

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PART 2

THE URBANIZED LAND ACCESS TOOLS

Brazil is one of the most unequal societies in the World. The wealthiest 10% of the population concentrate 45% of the national income, while the poorest 50% keep only 18% (IBGE, 2011). During urbanization, the appropriation of urban space occurred similarly, with enormous socio-spatial differentiation.

While the higher-income social classes appropriated the better areas of the cities with many facilities and opportunities, the lower-income classes were evicted to the less privileged regions. As a result, they live in precarious peripheral settlements, sometimes located in areas of environmental fragilities, such as steep slopes, river floodplains, or environmental preservation areas (MARICATO, 1996; VILLAÇA, 1998).

Behind this exclusionary and segregating modus operandi is the real estate appreciation, making central areas unaffordable for the poorest to live therein formally. On the other hand, some urban policies that excluded the poorest from the most valued regions worsened the problem. Such displacements, however, did not take place free of protest.

Due to these issues, the discussion on Urban Reform gained ground from the 1960s onwards. It resulted in the Seminar on Housing and Urban Reform, organized by the Brazilian Institute of Architects (IAB – *Instituto de Arquitetos do Brasil*) in 1963 at the *Hotel Quitandinha*, city of Petrópolis, Rio de Janeiro. This seminar proposed as a fundamental point "reviewing the concepts of ownership and use of urban land" in the Federal Constitution as a way to promote Urban Reform and to seek the solution for the housing issues (FRANCISCONI, 2013).

This concept was incorporated twenty-five years later in the Chapter on Urban Policy of the 1988 Federal Constitution. The thesis of the social function of the city and urban property relativizes the right to own urban property based on its use.

Since the beginning, several instruments have been developed to democratize access to urbanized land, thus, guaranteeing to the most excluded population the right to the city. These instruments were regulated by Federal Law N° 10,257/2001 – the City Statute. This section will cover the planning tools Solidarity Share and Social Interest Special Zone (ZEIS).

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Public policies and social housing provision within Social Interest Special Zones (ZEIS) in São Paulo

STUDIES ON THE MUNICIPAL MANAGEMENT AND THE REAL ESTATE MARKET'S PERFORMANCE IN AREAS OF THE ZEIS 3

Simone Gatti

Abstract

This article presents findings on public policies and real estate production aimed at social interest housing within Social Interest Special Zones (ZEIS), especially the ZEIS 3 type, in São Paulo's central area. The focus was to analyze how the changes proposed by the 2014 Master Plan (Law 16,050) and its applicability by municipal management and the real estate market contributed or not to the achieved instrument effectiveness. In addition, we considered efficacy in reserving land and providing social housing such as tenure security, the permanence guarantees of the resident population in their places of origin, and the improvement of the quality of life herein.

Keywords

ZEIS; Housing; Master plan; PEUC; FUNDURB; São Paulo.

INTRODUCTION

The present research on Social Interest Special Zones (ZEIS) in São Paulo has its origins in the author's Ph.D. and post-doctoral studies. ZEIS is a tool for the democratization of urban land, in particular those earmarked in areas with infrastructure, which are empty and underutilized, the so-called ZEIS 3 and ZEIS 5. These are configured as opportunities for new social housing in well-located areas and immersed into a suitable urban fabric. As well as areas that guarantee the permanence and improvement of the living conditions of the low-income population.

The research presents an assessment of public policies and real estate production in the ZEIS after the approval of the revision of the São Paulo Master Plan (Law 16.050 of 2014). The database comes from the permit issuance reports published by the Municipality of São Paulo. In addition, the analysis of the production of social housing in the respective ZEIS was also carried out.

The objective was to quantitatively identify the real estate provision of social housing within, and outside ZEIS compared to the previous 2002 Master Plan. We consider the existing incentives for urban regulation to make housing provision feasible. We also discuss the features of the projects and the demands met (who is producing social housing and for whom). Therefore, we verified the effectiveness of housing provision within ZEIS framing to reduce the Municipality's housing needs and provide the poorest access to urbanized and well-located areas.

Strategies defined by the 2014 Strategic Master Plan were also analyzed to make housing production viable within ZEIS 3, such as the PEUC (Compulsory Parceling,

Building, or Use of land) notifications issued on not built, underutilized or unused areas. And the reserve of 30% to Urban Development Fund (FUNDURB) for purchasing land for social housing as the Plan's guidelines to be applied preferentially within ZEIS 3.

There has been a significant change in the 2014 Master Plan's goals, prioritizing ZEIS for households with income below 3 minimum wages[1]. About 60% of the built-up area within ZEIS 1, 2, 3, and 4 must go for a housing profile known as HIS 1 – households up to 3 minimum wages income. This demand had not been contemplated by private production during the 2002 Master Plan. Consequently, it places the government as the leading housing provider regarding ZEIS framing. Without the action of public policies in these areas, which are also not being used by the private market, it is necessary to think of other strategies to reverse the process of idleness and precarious housing existing in the ZEIS 3 perimeters. Also, expand the possibilities of access to housing for the poorest people in central areas.

1. The minimum wage in brazil in 2021 was 1,100 reais, equivalent to 193 dollars (with exchange rate for December 2021)

ZEIS AS AN INSTRUMENT FOR DEMOCRATIZING ACCESS TO URBANIZED LAND

The Social Interest Special Zones (ZEIS) originated in the 1980s during the national re-democratization and reorganization of housing movements. In 1979, the National Housing Bank (BNH) created the PROMORAR to eradicate precarious agglomerations. The program aimed to finance projects to help shelter displaced populations in areas previously occupied by slums. It was the basis for ZEIS and AEIS (Social Interest Special Areas)'s conceptions.

At that time, progressive municipal administrations proposed applying ZEIS to enable land tenure regularization of precarious settlements, especially in well-located areas. It was precisely in this context when the first ZEIS experiences in Brazil happened. The first in the city of Recife (1983), then in Belo Horizonte (1985) (FERREIRA; MOTISUKE, 2007; CALDAS, 2009; SANTO AMORE, 2013).

The city of Recife was one of the pioneers. Due to many precarious settlements and slums (in portuguese: favelas) located in the city's central areas, Recife enacted its zoning law in 1983. To preserve this low-income community in regions under intense real estate pressure, it defined differentiated urban parameters for zoning.

In his analysis, Souza (2004) concluded that Recife achieved reasonably. The association of ZEIS with the Real Usage Right Concession (CDRU, Portuguese: *Concessão do Direito Real de Uso*) enabled partially land tenure regularization. Out of the 65 Social Interest Special Zones drawn in Recife, 34 were under regularization in 2004. In seven, the CDRU had already been issued.

On the other hand, ZEIS in unbuilt and underutilized areas, not only in favelas (assigned as ZEIS 2 and 3 in São Paulo), had its origins in the city of Diadema. Diadema innovated by earmarking empty areas as stock for the provision of housing units of social interest, being replicated by other municipalities in ABC Paulista later (FERREIRA; MOTISUKE, 2007). However, Affonso and Denaldi (2012) noted that introducing empty ZEIS was more provocative in Santo André due to disputes between developers and housing movements. In 1999, the Social Interest Special Zones were executed by federal legislation through Law N° 9,785. This law

changed a previous direction that provided for the subdivision of urban land at the national level, Law 6,766/79. And in 2001, after City Statute was enacted, municipalities held a more solid legal basis for including ZEIS in their Municipal Master Plans.

In São Paulo, ZEIS was launched after the approval of the 2002 Master Plan. Four types of ZEIS were detached: ZEIS 1 (areas occupied by precarious housing, such as favelas), ZEIS 2 (empty land), ZEIS 3 (vacant and underutilized areas counting on infrastructure), and ZEIS 4 (watershed protection areas). Minimum percentages for social housing construction by income strata were also defined in each of these zonings. The revision of the 2014 Master Plan also created a new category, ZEIS 5. These zones are also located in central areas but focused on housing production for the low-income market.

In this context, ZEIS 3 (our focus) embodies an important advance in Brazilian urban planning regulation. It makes possible for the low-income population to achieve the right to housing not only in peripheral and occupied areas, through land regularization, but also in the expanded center of the city, in empty and underused areas, endowed with infrastructure and attractive to the real estate market. Therefore, Social Interest Special Zones type 3 are the central stimulus for providing well-located social housing and densifying the downtown area population. Thus, besides guaranteeing the right of people to remain, it improves living conditions in suitable, urbanized areas.

According to the analysis carried out by the Evaluation and Training Network for the Implementation of Participatory Master Plans published in 2011 (SANTOS JUNIOR; MONTANDOM, 2011), at that time, 81% of the Brazilian municipalities had already adopted ZEIS as

a planning tool. By the way, less than half of the Plans themselves addressed specific locations for ZEIS to take place. Meanwhile, very few cities set aside land well-located in areas with infrastructure for social housing (CARDOSO; SILVEIRA, 2011). However, a close look at ZEIS definitions by the Master Plan points towards significant achievements in regulating access to well-located land.

Although the challenges, the report recognizes the crucial role of the tool in ensuring the permanence of the low-income population in high-valued areas through land tenure regularization. Such efforts articulated with other instruments aimed at democratizing urban land access. Ferreira and Motisuke (2007) argue:

> The ZEIS and AEIS have been considered the most suitable planning instrument to facilitate land and urban regularization of different types of clusters and areas of precarious occupation and promote new units. Their meaning as a mechanism for expanding access to housing and consequently to urban land, ensuring the social function of property, also unfolds perspectives on the possibilities of redistribution and greater control of land and real estate valuation that the instrument makes possible (FERREIRA; MOTISUKE, 2007, p. 46)

Thus, the importance of the instrument is evident, which defines specific rules for land parceling, use, and occupation, superseding the traditional zoning.

ZEIS 3 ACCORDINGLY WITH THE 2002 MASTER PLAN

In São Paulo, the resolution of ZEIS appeared for the first time in the 1991 Bill for the Master Plan Review of the Municipality of São Paulo (SÃO PAULO, 1991). Article 21 defined ZEIS as: "(...) those zones primarily intended to provide and maintain social housing".

However, it took more than twenty years for ZEIS to be instituted in the city of São Paulo. The 2002 Master Plan (Municipal Law N° 13,430/2002) finally regulated ZEIS at the municipal level. Minimum percentages were set for building social housing and housing for the affordable market by income strata in each ZEIS.

Article 171 described the Special Zones of Social Interest as "portions of the territory intended to urban recovery, land tenure regularization and production of Social Interest-Oriented Housing – HIS (Portuguese: *Habitação de Interesse Social*) or the Affordable Market Housing – HMP (Portuguese: *Habitação para Mercado Popular*)." They were earmarked as

- **ZEIS 1** – areas occupied by low-income population, including favelas, precarious settlements, and social-oriented housing projects or the affordable market, in which there is an expressed public interest in promoting urban recovery, land regularization, creation and maintenance of social housing, including social and cultural facilities, public spaces, services, and local businesses;

- **ZEIS 2** – predominantly areas with unbuilt or underutilized plots or lands, suitable for urbanization, where there is a public interest in promoting Social Interest Housing - HIS or the Affordable Market - HMP, including social and cultural facilities, public spaces, services, and local businesses;

- **ZEIS 3** – predominantly areas with underutilized land or buildings located in regions holding infrastructure, urban services, and job opportunities, where there is a public interest in promoting or expanding the use of Social Interest Housing - HIS or Affordable Market - HMP and improving housing conditions;

- **ZEIS 4** – unbuilt plots of land suitable for urbanization in a watershed or environmental protection areas. These areas can be used for Social Interest Housing projects for housing assistance to families removed from risk areas and permanent preservation or clearance of poor settlements defined as ZEIS 1.

During the 10 years of implementation of the ZEIS by the 2002 Master Plan, housing provision for low-income households in central areas earmarked as ZEIS was well below expectations, in terms of numbers of units launched and perimeters involved in the urban transformation

According to a survey carried out by the Municipal Secretariat for Urban Development, which supported the revision of the Master Plan in 2013[2], more than half of the areas remained without hosting new developments. From 2002 to March 2013, the government carried out 16 projects aimed at social housing (HIS), 4 building renovations of HIS, 21 projects of HIS/HMP by the private market, 8 public facilities, and 4 high-end buildings.

The following table shows housing provision within ZEIS 3 by the number of perimeters used, according to the subcategories used in 2013 for revising the Master Plan.

The private market was responsible for most of the combined provision of HIS and HMP within ZEIS 3. However, it restricted housing provision to families earning income between 5 and 6 minimum wages. This is mainly because there was not a mandatory legal percentage to serve lower-income families (according to data identified by Engelux Engenharia). Out of the 16 buildings delivered by Engelux between 2006 and 2015, none of them were sold to families with an income lower

2. The complete evaluation of housing production in ZEIS was carried out in 2013, during the PDE review process by the Municipal Secretary of Urban Development and the Secretary of Housing. Retrieved from: http://gestaourbana.prefeitura.sp.gov.br/arquivos/GT_HABITACAO_PDE_-_APRESENTACAO_--_04maio2013_-_v09_05.pdf.

ZEIS 3 Categories	Housing Provision in ZEIS 3, from 2002 to 2013						
	Total of perimeters	Public social-oriented housing	Private social-oriented housing	High-end developments	Facilities	Mixed-Use	No interventions
Underutilized lots	56	10	5	3	8	1	29
Developed lots	35	-	-	-	-	-	35
Partially developed lot	18	-	-	-	-	-	18
Set of blocks	27	6	16	-	-	-	5
Buildings	9	4	-	-	-	-	5
TOTAL	**145**	**20**	**20**	**3**	**8**	**1**	**93**

Table 6.1
Housing Provision – ZEIS 3 (2002-2013)
Source: Authors' elaboration from SMDU (2013).

than 3 minimum wages. Two social housing buildings (HIS) were awarded to families earning between 3 and 5 minimum wages. The rest were passed to households with incomes above 5 minimum wages (GATTI, 2015).

According to SECOVI[3] data made available in 2013 on private property launches, there was a constant growth in production in ZEIS 3. This growth reached 8,712 units, with the most significant peaks in 2008, 2009, and 2011. However, the number of approved HIS and HMP units was negligible concerning other residential typologies.

Even so, SECOVI data indicated practically the same number of HIS launched in ZEIS and outside ZEIS. Unlike other housing deliveries, which are substantially higher outside ZEIS. For that moment, it could represent the ZEIS relevance in delivering social housing units, whether for locational factors or for the incentives offered. Perhaps such data most differs from social housing provision in the subsequent 5 years under a new Master Plan, as we

3. N.T. SECOVI is the Union For Purchase, Sale, Rentals, and Management of Residential And Commercial Properties.

will see in the analysis of housing production from 2015 onwards, when housing starts increase exponentially outside the ZEIS. .

Units in Projects approved in ZEIS (2002-2013)

Zoning	HIS	HMP	Others	Total	%
ZEIS 1	9,890	715	1,327	**11,932**	35.10%
ZEIS 2	4,981	4,574	1,022	**10,577**	31.12%
ZEIS 2	4,158	3,788	3,538	**11,484**	33.78%
TOTAL	**19,029**	**9,077**	**5,887**	**39,993**	**100.00%**
%	55.98%	26.70%	17.32%	100%	

Table 6.2 **Units in Projects approved in ZEIS (2002-2013)** Source: Tanaka (2018).

Units in Projects approved inside and outside ZEIS (2002-2013)

Zoning	HIS	HMP	Others	Total	%
Inside	19,029	9,077	5,887	**33,993**	8.66%
Outside	19,256	46,784	292,539	**358,579**	91.34%
TOTAL	**38,285**	**55,861**	**298,426**	**392,572**	**100.00%**
%	9.75%	14.23%	76.02%	100%	

Table 6.3 **Units in Projects approved inside and outside ZEIS (2002-2013)** Source: Tanaka (2018).

ZEIS 3 ACCORDINGLY WITH THE 2014 MASTER PLAN

2014 Master Plan, approved by Law N° 16.050, of 31 July of 2014, created an additional ZEIS category — ZEIS 5. These zones of type 5 are also inside central areas but focused on the low-income market housing.

Pursuant to article 44, the Special Social Interest Zones are:

> [...] portions of the territory predominantly intended for decent housing for the low-income population through urban improvements, environmental recovery, and land regularization concerning precarious and irregular settlements, as well new units of Social Interest Housing - HIS and Affordable Market Housing - HMP to be provided with social facilities, infrastructure, green areas, and local businesses and services, within the urban area (SÃO PAULO, 2014, Art. 44).

Article 45 classified ZEIS as follows (SÃO PAULO, 2014, At. 45):

> **I.** ZEIS 1: Areas characterized by favelas and irregular settlements, and social interest housing developments, and popular housing settlements, occupied mainly by low-income populations where there is public interest in maintaining the resident population and promoting land and urban regularization, environmental recovery and production of Social Interest Housing;
>
> **II.** ZEIS 2: Areas characterized by unbuilt or underused land that is suitable for urbanization, and where there is public or private interest in producing Social Interest Housing Developments;

> **III.** ZEIS 3 : Areas with vacant or underused properties, irregular tenements, or damaged buildings located in regions endowed with services, equipment and urban infrastructure, good job offers, where there is public or private interest in promoting Social Interest Housing Developments;
>
> **IV.** ZEIS 4: Areas characterized by vacant land, suitable for urbanization and construction, located in watershed protection areas of the Guarapiranga and Billings reservoirs [...], destined for the promotion of Social Interest Housing to serve families living in settlements located in the referred Watershed Protection Area, preferably as a result of resettlement resulting from an urbanization plan or from the eviction of risk areas and permanent preservation areas, in compliance with the State legislation;
>
> **V.** ZEIS 5: Properties or groups of properties, primarily vacant or underused, located in areas where there are services, facilities, and infrastructure, where there is private interest in producing housing projects for the popular market and social interest.

The new Master Plan conceived significant progress toward making housing achievable for low-income families: the Plan expanded the total number of ZEIS perimeters from 964 to 2,542 and from 145 to 478 regarding ZEIS 3 perimeters, allocating them primarily to families with income of up to 3 minimum wages. And, most importantly, the 2014 plan recommended mechanisms that allowed the creation of a land bank for social housing.

The social interest income range was divided into two: HIS 1 (0 to 3 minimum wages) and HIS 2 (3 to 6 minimum wages), defining a minimum percentage of 60% for the housing provision of HIS 1 within ZEIS of type 1, 2, 3 and 4 to ensure housing for the poorest households. Families with a monthly income of less than 3 minimum wages represent most of the housing deficit in São Paulo.

The Plan sought to solve problems encountered in the previous law, when the market used the ZEIS stock to provide housing exclusively for families with income above 5 M.W. Yet, the most vulnerable populations - families with an income of up to 1 minimum wage, which require subsidies or even those with income of up to 2 minimum wages thus cannot access the bank financing system, may not be embraced if public administration does not assume a commitment and if housing provision remains on the market's account or projects run by financing rules. Therefore, there is always a risk of housing provision taking place only within the maximum limits required by law.

Table 6.4 **Share of social housing units within ZEIS 3**
Source: Author's elaboration.

2002 Master Plan (Law N° 13,430)*

HIS	HMP	Other Uses
Minimum 40%	Maximum 40%	20%

2014 Master Plan (Lawn N° 16,050) **

HIS 1	HIS 2	HMP	Other Uses
Maximum 60%	Allowed	Maximum 20%	

* In the 2002 Master Plan, HIS 1corresponded to incomes between up to 6 minimum wages. and HMP between 6 and 16 minimum wages.

** In the 2014 Master Plan, HIS 1 corresponded to incomes up to 3 minimum wages.; HIS 2 between 3 and 6 minimum wages.; HMP between 6 and 10 minimum wages.

The 2014 Master Plan registered as sources of funding the Urban Development Fund (FUNDURB) and the Consortiated Urban Operations (OUC). First, at least 30% of the resources will be directed at purchasing well-located land to implement social housing and subsidizing housing programs. For the second, at least 25% of the resources will promote social housing within the intervention area, especially purchased land. Besides, the Plan created a counterpart mechanism known as "Solidarity Share," which establishes housing or resources for FUNDURB on the developments with an area larger than 20 thousand m^2.

The new Plan also regulates the PEUC (Compulsory Parceling, Building and Utilization). In addition, it determines its priority application, especially in areas earmarked as ZEIS 3. In other words, the new legal framework expands the possibilities of making the ZEIS effective but implies new and old challenges. For example, the almost total responsibility of the public authorities for housing production in ZEIS (due to the need to serve the lower-income groups) and the continuing difficulties in controlling demand and social control through the Management Councils, which remained unclear guidelines to be effective.

From the approval of the Strategic Master Plan until the writing of this text, 6 years have passed. That is approximately one-third of its validity. Next, we will assess how the ZEIS is being operated in the current legal framework.

PUBLIC AND PRIVATE REAL ESTATE PRODUCTION AND PUBLIC POLICIES WITHIN ZEIS 3 AFTER APPROVAL OF THE 2014 SÃO PAULO'S MASTER PLAN REVISION

Concerning the existing challenges for the ZEIS 3 to work effectively on the access to housing and on the permanence of the poorest population in central areas, it is necessary to assess the municipal public policies and public and private real estate performance in areas earmarked as ZEIS 3. So, new legal framework contours impact the instrument's effectiveness.

Among the public policies in progress, the main action fronts in the ZEIS 3:

(1) Housing provision within ZEIS, compared to the provision outside ZEIS (public and private), is feasible under mandatory minimum percentage for priority income groups.

(2) Application of Compulsory Parceling, Building and Utilization (PEUC).

(3) Application of resources from the Urban Development Fund (FUNDURB), the last two defined by the Master Plan to be applied/used primarily within ZEIS 3.

The three analyzes can bring us information of different orders:

i. if the strategies created by the Master Plan to fulfill the ZEIS 3 objectives are effective.

ii. Considering the obstacles faced by the real estate market to deliver decent housing for the poorest strata, for whom, by whom, and where the provision of HIS 1 is being carried out?

iii. Which public policies are being developed simultaneously, considering the need for linking actions to achieve the foreseen goals?

iv. What are the administrative, legal, and management barriers?

v. What are the opportunities to overcome barriers?

That said, we present the data and analysis they provide.

Social housing provision in ZEIS

We survey the characteristics of social housing carried out under Law N° 16,050/2014 from reports by SISACOE (Construction and Building Control System) and the website "eyeing the work" (in Portuguese: De Olho na Obra) published by São Paulo City Hall between August 2014 and December 2019.

As criteria to refine the search, permits that differentiated between HIS 1 and HIS 2 (characteristic of the current law). And, records related to "ZEIS" nomenclature without the perimeter description, another change given by the 2014 Master Plan[4]. Adopting those criteria was significant since many of the developments within ZEIS could still use the previous legislation by the Protocol Right. Using such criteria to refine the analysis of what was produced with the rules of the new law justifies the distinguished results presented by the city in the 2014 Plan assessment, published in September 2019[5].

It is essential to highlight the complexity of using this data. Available information was taken from a file in which the fields were free to fill, resulting in unreliable

4. ZEIS were identified by their perimeter in the previous Master Plan, which in many cases encompassed more than one block. Each ZEIS had a number per sub-prefecture, such as ZEIS 3 C 016 (Sé), consisting of 11 blocks. Currently, ZEIS are identified by block number, without perimeter description.

5. The São Paulo City Hall, through the Municipal Department of Urban Development (SMDU), made available in September 2019, on the Urban Management Portal, the five-year report on the application of the PDE. Available at: https://gestaourbana.prefeitura.sp.gov.br/wp- content/uploads/2019/09/Balan%C3%A7o--de-5-anos-do-PDE-20190911-2.pdf.

information. It is still uncertain how the projects were framed because of the Protocol Law. Besides, because of the time gap between the approval of the 2014 Master Plan and the Land Use and Occupation Law in 2016, where there are many possible arrangements.

It is also relevant to mention that we are conducting a quantitative and comparative analysis that cannot grasp all the study layers required by the topic. However, it provides us significant paths to subsidize more in-depth qualitative research to understand how influencing 'Minha Casa Minha Vida' program (MCMV) was on private production.

The survey approved under the 2014 Master Plan rule identified 49 public and 655 private projects, divided into different zoning uses, as shown below.

Table 6.5
Housing provision up to 2019
Source: by Simone Gatti and Marina Marques from SISACOE/ PMSP issued from August 2014 to December 2019 (São Paulo, 2021).

Type	PUBLIC	PRIVATE	ZEIS 1	ZEIS 2	ZEIS 3	ZEIS 4	ZEIS 5	ZEIS	OUTSIDE ZEIS	AXES
HIS 1 + HMP	0	1	0	0	0	0	0	0	1	1
HIS 2 + HMP	0	90	0	0	3	0	33	35	55	24
HIS 1 + HIS 2 + HMP	0	34	3	23	6	0	1	33	1	0
HIS 1 + HIS 2	4	18	3	7	11	0	1	21	1	1
HIS 1	43	23	6	18	9	0	6	37	29	6
HIS 2	2	489	12	0	9	0	10	31	460	133
TOTAL	**49**	**655**	**24**	**48**	**38**	**0**	**51**	**157**	**547**	**165**

Note: There are two HIS 1 project within ZEIS 2 and ZEIS 5, 4 HIS 1 + HIS 2 +HMP projects within ZEIS 1 and ZEIS 5, and 1 HIS 2 + HMP project within ZEIS 3 and ZEIS 5.

In developments that do not mix HIS 1 with other income profiles, the concentration of HIS 1 provision (regardless of location) is slightly greater in public (43 developments) than in private (23 developments). However, when HIS 1 is mixed with HIS 2 or HMP, the number of private HIS 1 developments rises to 53, compared to 4 public.

We identified 76 private developments, wholly or partially, intended for families with incomes lower than 3 minimum wages (HIS 1). There's a need to determine how feasible the demand is met in these projects. One assumption is that they are apparently unfeasible for the private entrepreneur, even when carried out by programs linked to public subsidies such as the 'Minha Casa Minha Vida' program (MCMV).

Based on Magik JC Empreendimentos Imobiliários deliveries, the private sector finds it very troublesome to assemble HIS 1 concerning a standard profit rate because, regardless of the price sold per unit, the target buyer can hardly manage access bank financing. It is left for these buyers to have their own resources of at least R$ 30,000, which is almost impossible. Magik's current projects made it conceivable for HIS 2 to access the entrance fee of around R$ 50,000[6].

6. Information was provided in an interview with André Czitron, owner-partner of Magik JC, in May 2019.

The survey on permits issued for social housing reveals the low number of social housing projects within ZEIS 3 (38 in total and 26 as HIS 1) and most social housing provisions outside ZEIS (547 in total and 32 as HIS 1). These data show a significant difference verified in the previous period, under the former 2002 Master Plan. Then, the number of housings inside and outside ZEIS was practically identical.

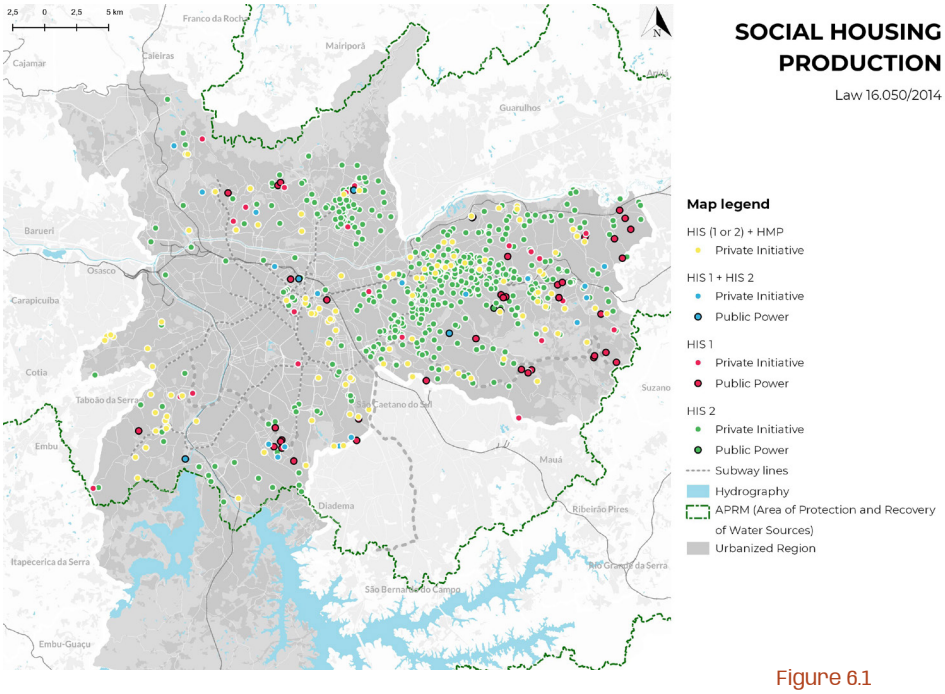


Figure 6.1 **Location of housing social provision under the 2014 Strategic Master Plan** Source: Prepared by Simone Gatti and Marina Marques based on data from SISACOE/PMSP permits issued from August 2014 to December 2019.

During 2014-2019, 248 social housing developments were within ZEIS. Out of these, 51 were within ZEIS 5 (a distinguished income profile). Besides, the impressive number of 547 social housing developments (considering all arrangements amongst HIS1, HIS2, and HMP) are outside ZEIS. This factor explains the requirement of ZEIS to mainly meet the lowest incomes, which the private market cannot reach. Thus, through HIS 2, meeting the market demand linked to housing financing with the benefits of social housing, especially free onerous grants.

With the social housing developments in ZEIS 3 and 5, fewer ZEIS perimeters experienced housing developments in the map below.

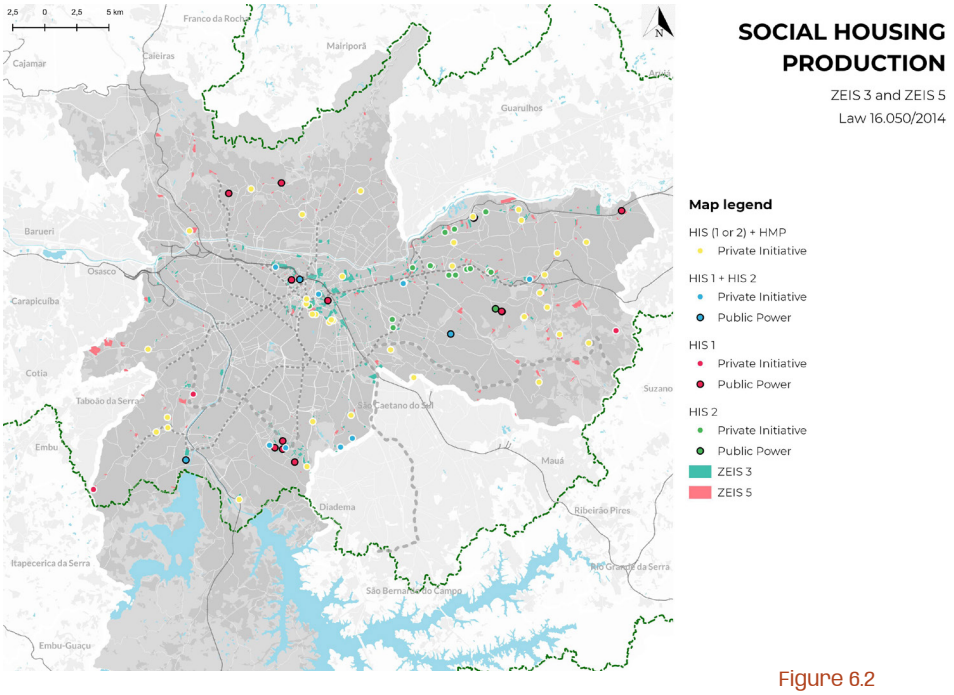


Figure 6.2 **Location of housing social within ZEIS 3 and ZEIS 5** Source: Prepared by Simone Gatti and Marina Marques based on data from SISACOE/PMSP permits issued from August 2014 to December 2019.

Finally, the survey shows us a very expressive number of HIS 2 produced by the private market after the approval of the 2014 Master Plan, especially outside ZEIS. Since then, the private market has created 517 HIS 2 projects outside ZEIS, as shown in the following tables.

It is also possible to confirm that 35 of the public stock is concentrated within ZEIS and 14 outside ZEIS. Below are the maps displaying the approved projects, public and private, separately.

Table 6.6 **Public provision of social housing up to 2019** Source: Prepared by Simone Gatti and Marina Marques based on data from SISACOE/PMSP issued from August 2014 to December 2019.

Type	ZEIS 1	ZEIS 2	ZEIS 3	ZEIS 4	ZEIS 5	ZEIS	OUTSIDE ZEIS	AXES	TOTAL
HIS 1 + HMP	0	0	0	0	0	0	0	0	**0**
HIS 2 + HMP	0	0	0	0	0	0	0	0	**0**
HIS 1 + HIS 2 + HMP	0	0	0	0	0	0	0	0	**0**
HIS 1 + HIS 2	0	2	2	0	1	4	0	0	**4**
HIS 1	3	15	7	0	5	29	14	0	**43**
HIS 2	0	0	0	0	2	2	0	0	**2**
TOTAL	**3**	**17**	**9**	**0**	**8**	**35**	**14**	**0**	**49**

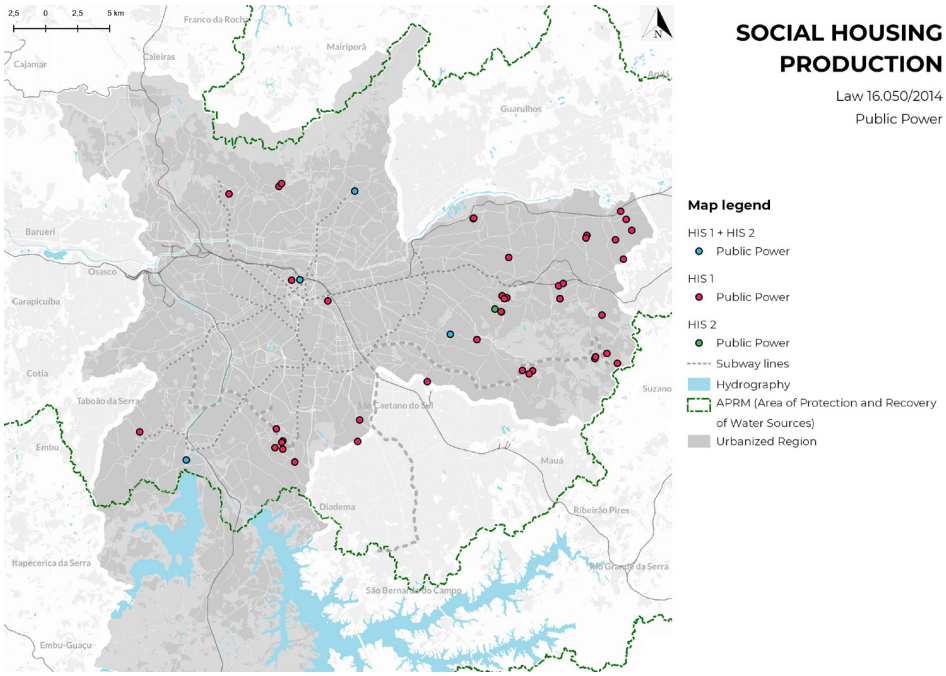
Note: There is one HIS 1+HIS 2 project within ZEIS 2 and ZEIS 5, one HIS 1 project within ZEIS 2 and ZEIS 5.

Table 6.7 **Private provision of social housing up to 2019** Source: Prepared by Simone Gatti and Marina Marques based on data from SISACOE/PMSP issued from August 2014 to December 2019

Type	ZEIS 1	ZEIS 2	ZEIS 3	ZEIS 4	ZEIS 5	ZEIS	OUTSIDE ZEIS	AXES	TOTAL
HIS 1 + HMP	0	0	0	0	0	0	1	1	**1**
HIS 2 + HMP	0	0	3	0	33	35	55	24	**90**
HIS 1 + HIS 2 + HMP	3	23	6	0	1	33	1	0	**34**
HIS 1 + HIS 2	3	5	9	0	0	17	1	1	**18**
HIS 1	3	3	2	0	1	8	15	6	**23**
HIS 2	12	0	9	0	8	29	460	133	**489**
TOTAL	**21**	**31**	**29**	**0**	**43**	**122**	**533**	**165**	**655**

Note: There is one HIS 2+HMP project within ZEIS 3 and ZEIS 5, one HIS 1 project within ZEIS 2 and ZEIS 5.

Figure 6.3
Location of HIS1 and HIS2 by public provision (2014 Master Plan)
Source: Prepared by Simone Gatti and Marina Marques based on data from SISACOE/PMSP issued from August 2014 to December 2019.



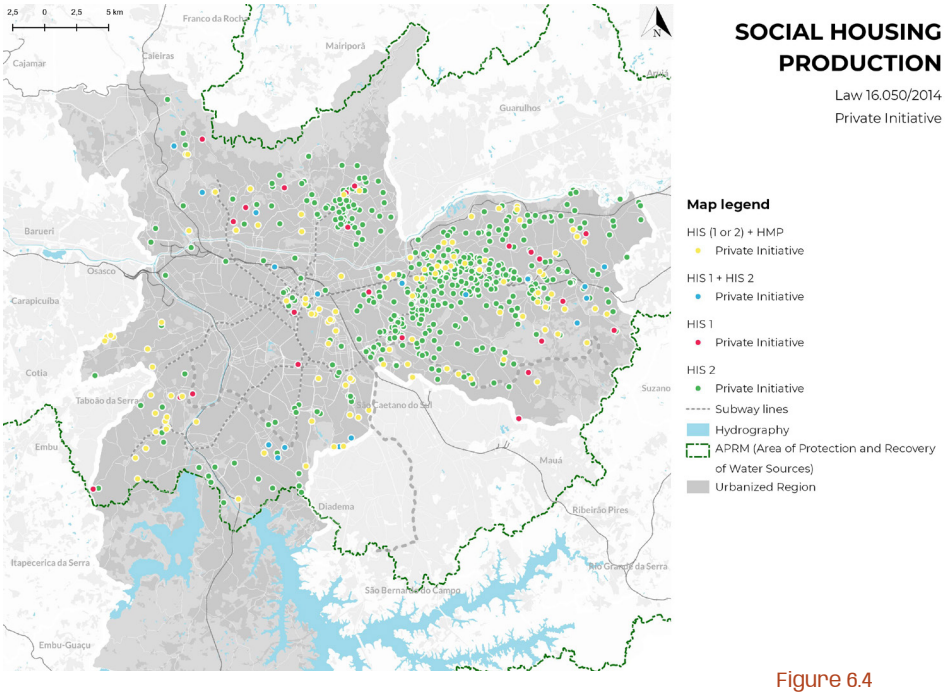


Figure 6.4 **Location of HIS1 and HIS2 by private provision (2014 Master Plan)** Source: Prepared by Simone Gatti and Marina Marques based on data from SISACOE/PMSP issued from August 2014 to December 2019.

Incentives for social housing

A more in-depth analysis of urban policy is also required to understand what triggers the imbalance in housing policy. In other words: why the special zones of social interest (ZEIS) 3 have not been a priority for social housing projects?

However, the advantages and disadvantages of delivering units inside and outside ZEIS can give us some clues. At least, indications are based on the private sector's interests.

Until the approval of Municipal Law N° 13,885/2004, only public or partner companies could produce social interest housing. From then on, the private market had to begin understanding the typological needs, programs suited to the indebtedness capacity, credit lines, and available financing.

In the 2002 Master Plan, tangible incentives to produce housing within ZEIS were granted a FAR (Floor Area Ratio) greater than 4 for HIS and HMP. For other uses, the FAR could also reach 4. This incentive remained in the 2014 Plan for ZEIS 2, 3, and 5 cases. Given more in other city areas, except for ZEU – Urban Structuring Hub, where FAR could reach 4 for all types of use. This represented a more significant advantage for real estate production within ZEU than ZEIS, as there was no need to comply with the minimum percentages of HIS along with a ZEU.

About two years later, Decree N° 57,377/2016, which regulates the rules for HIS projects, expanded incentives for social housing production in ZEU, where the FAR can reach 6 or 5 for HMP. As a result, in table 2 of the respective Decree, presented below, ZEU is the only competitor offering a FAR for the ZEIS. All other zones operate at much lower levels.

The regulation of the master plan and the ZEU offering a higher FAR for social housing does not require the HIS 1 type. That is, it directly competes with private production within ZEIS, making the HIS type 1 becomes a responsibility of public authorities or social entrepreneurs committed to the cause of the right to housing. In the Urban Transformation Structuring Axes, the production of social housing was exclusively developed by the private market and four times larger than in ZEIS types 2 and 3 and three times larger than in ZEIS type 5. The map below shows this high density of new housing of social interest in the Axes, in which 157 of the 165 projects are projects aimed solely at HIS 2 or HIS 2 + HMP.

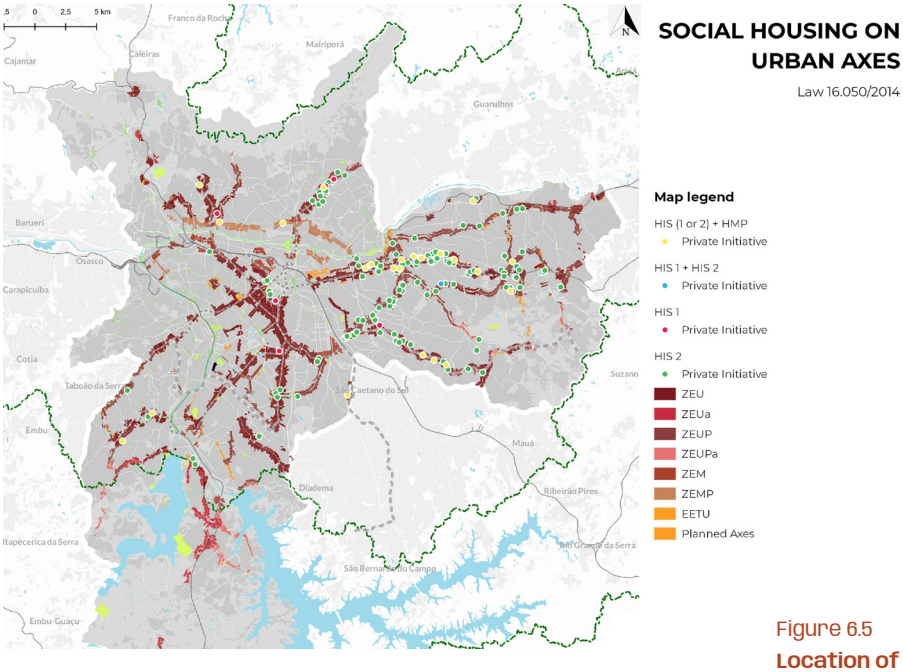


Figure 6.5
Location of HIS within ZEU
Source: Prepared by Simone Gatti and Marina Marques based on data from SISACOE/PMSP issued from August 2014 to December 2019.

Another incentive that hinders the real estate market from adhering to ZEIS is the Centro Urban Operation, which enables the FAR of 6 for any residential development within its perimeter, regardless of income bracket. If producing HIS could be an incentive for the developer because of the additional building potential offered by the ZEIS 3, with the gains from volume, and the eventual production of units at lower prices of the Centro Urban Operation incentives, ZEIS-3 ceases to be an incentive when the central area allows the construction of 6 times the land area - and dismissing the need to be socially oriented residences.

Table 6.8 **Decree Nº 57,377/2016** Source: São Paulo (2016).

TYPE OF ZONE		ZONE	Floor Area Ratio				Maximum occupancy rate		Maximum height template (m)	Mininum setbacks (m)			Dwelling Share per unit (m²)
			FAR minimum	FAR básico	FAR maximum		lot up to 500m²	over 500m²		Front (i)	Building height less than or equal to 10 meters	Building height greater than 10 meters (j)	
					EHIS	EHIS							
TRANSFORMATION	ZEU	ZEU	0.5	1	6	5	0.85	0.7	NA	NA	NA	3	NA
		ZEUa	NA	1	3	2.5	0.7	0.5	NA	NA	NA	3	NA
	ZEUP	ZEUP (b)	0.5	1	3	2.5	0.85	0.7	NA	NA	NA	3	NA
		ZEUPa (c)	NA	1	1.5	1.25	0.7	0.5	NA	NA	NA	3	NA
	ZEM	ZEM	0.5	1	3 (d)	2.5 (d)	0.85	0.7	NA	5	NA	3	NA
		ZEMP	0.5	1	3 (e)	2.5 (e)	0.85	0.7	NA	5	NA	3	NA
QUALIFICATION	ZC	ZC	0.3	1	3	2.5	0.85	0.7	48	5	NA	3	NA
		ZCa	NA	1	1.5	1.25	0.7	0.7	20	5	NA	3	NA
		ZC-ZEIS	0.5	1	3	2.5	0.85	0.7	NA	5	NA	3	NA
	ZCOR	ZCOR-2	0.5	1	1.5	1.25	0.5	0.5	10	5	NA	3	NA
		ZCOR-3	0.5	1	1.5	1.25	0.5	0.5	10	5	NA	3	NA
		ZCORa	NA	1	1.5	1.25	0.5	0.5	10	5	NA	3	NA
	ZM	ZM	0.3	1	3	2.5	0.85	0.7	NA	5	NA	3	NA
		ZMa	NA	1	1.5	1.25	0.7	0.5	15	5	NA	3	NA
		ZMIS	0.3	1	3	2.5	0.85	0.7	NA	5	NA	3	NA
		ZMISa	NA	1	1.5	1.25	0.7	0.5	15	5	NA	3	NA
	ZEIS	ZEIS-1	0.5	1	2.5 (l)		0.85	0.7	NA	5	NA	3	NA
		ZEIS-2	0.5	1	4		0.85	0.7	NA	5	NA	3	NA
		ZEIS-3	0.5	1	4		0.85	0.7	NA	5	NA	3	NA
		ZEIS-4	NA	1	2(l)		0.7	0.5	NA	5	NA	3	NA
		ZEIS-5	0.5	1	4		0.85	0.7	NA	5	NA	3	NA
	ZDE	ZDE-1	0.5	1	3	2.25	0.7	0.7	NA	5	NA	3	NA
		ZDE-2	0.5	1	3	2.5	0.7	0.5	NA	5	3	3 (k)	NA
	ZPI	ZPI-1	0.5	1	2.25	1.875	0.7	0.7	NA	5	3	3 (k)	NA
		ZPI-2	NA	1	2.25	1.875	0.5	0.3	NA	5	3	3 (k)	NA

The attractiveness of downtown São Paulo for real-estate developments over the last decade

São Paulo's downtown became one of the investment region-targets aimed at middle and high incomes' developments. In addition, there was a significant incentive given by Centro Urban Operation besides structural changes in the market, such as the scarcity of stock in other areas of the city. Other reasons are the changes in the real estate sector, which offered more legal security to entrepreneurs and buyers by broadening the bases for real estate credit. Finally, the opening of large developers' capital and the expansion of real estate credit as of 2010. Thus, an economic interest came to reverse a population depletion pattern that occurred until the 1990s.

According to data from the Census (IBGE, 2010), the Downtown São Paulo population grew 15.4% between 2000 and 2010. It attracted the launch of 33,582 new residential units - 10% of the total launched in the city. Thus, it became the top-ranked neighborhood with the highest number of projects carried out. Since 2014, Sé has been continuously increasing its population participation rates among districts. It reached about 20% of the units launched in 2017, equivalent to 5,048 new units. Data come from a survey published in 2018 by the then Municipal Urbanism and Licensing Secretariat - SMUL, currently SMDU, Municipal Urban Development Secretariat (PMSP-SMUL, 2018).

The survey points out the high price of real estate and the high density of buildings, equivalent to 6.5 times the lot's area averagely. They are 20-story buildings deployed in a single lot. They usually offer small apartments (about 40 m^2, with one or two bedrooms). The smaller the unit size footage, the higher is the acquisition price, especially from 2009 onwards.

The survey also pointed to a decoupling between property price and floor space related to a robust speculative component. Buyers usually do not acquire them to shift as their homes but invest them as an asset. During the period analyzed, people paid more for less (in terms of filming) relatively. Sé is the most expensive area and among those with the smallest-sized apartments.

The table below shows the different incentives offered by the provision of social housing and their respective laws. Thus, we can get an idea of how one incentive ends up undermining the other when elaborating an urban policy.

TAble 6.9 **Incentives for housing provision inside and outside ZEIS according to law**
Source: Prepared by Simone Gatti.

Legal framework	% HIS ZEIS	Value HIS-HMP	Incentives outside ZEIS	Incentives within ZEIS
2002 Master Plan	Min 50% HIS; Max 50% others	HIS 0 a 6 M.W. HMP 6 a 16 M.W.	FAR = 4 free for HIS	CA 4 free for HIS, HMP e and for other uses
Laws 13,402/2002; 13,476/2002; 13,657/2003	-	-	Exemption from ITBI, ISS for HIS, and fees for approval of HIS and HMP	
LUOS 2004 (Law 13,885/2004)	Min 40% HIS, Max 40% HMP, 20% others	-	-	-
2014 Master Plan	Min 60% HIS 1 HIS 2 allowed max 20% HMP and other uses	HIS 1 - 0 to 3 M.W. HIS 2 - 3 to 6 M.W. HMP 6 to 10 M.W.	Free maximum FAR for HIS, *May reach 4 in ZEU or 2 in other zones	FAR = 4 free for HIS and HMP in ZEIS 2, 3 and 5
Decree 57,377/2016		HIS 1: up to R$ 2,640.00 HIS 2: R$ 2,640.00 to R$ 5,280.00 HMP: R$ 5,280.00 to R$ 8,800.00	Depending on the zone, reaching a maximum of 3	FAR = 4 free for HIS and HMP within ZEIS 2, 3, 5 *FAR = 6 for HIS within ZEU *FAR = 5 for HMP within ZEU
Centro Urban Operation (Law 12,349/1997)	-	-	FAR = 6 free (Regardless of income level and whether inside ZEIS)	

Application of Compulsory Parceling, Building and Utilization (PEUC) overlapping ZEIS 3

Such social-oriented instruments date back to the National Movement for Urban Reform (MNRU), which introduced the chapter 'Urban Policy' into the 1988 Federal Constitution. MNRU drafted an Amendment for democratizing access to land. Art. 182 of the Constitution defined the Master Plan as a compulsory instrument for cities with more than 20 thousand inhabitants, including land ordering- requirements for fulfilling the social function of urban property and sanctions for vacant properties' owners. That is the application of the PEUC, progressive taxation over time, and expropriation sanction.

In São Paulo, instruments aimed at achieving the social function of the property had already been elaborated in the 2002 Master Plan. Still, it was only in 2010 when such tools obtained a specific basic regulation. In 2011, a municipal decree recorded the properties that could receive notification from not fulfilling the social function. Finally, in 2013, during mayor Fernando Haddad's administration (2013-2016), the instruments took a practical shape in urban policy by creating the Department for Control of the Social Function of Property, unitedly with the SMDU - Municipal Secretariat for Urban Development. The inclusion of the instruments into the new Master Plan was approved in 2014, as we know. Subsequently, in October 2014, PEUC gained a specific order and began sending notifications to owners. Then, in 2015, progressive tax over time (Portuguese: *IPTU Progressivo no Tempo*) got its own regulation. Finally, in 2016, the Real Estate Consortium (Portuguese: *Consórcio Imobiliário*) was also taken into charge by City Hall.

The three social-oriented planning tools were applied successively, in the following order: Compulsory Parceling, Building and Utilization (PEUC), Urban Land Tax Progressive in Time (IPTU Progressivo no Tempo), and Expropriation Through Payment with Public Debt Securities.

They start by notifying urban landowners in the following conditions: unbuilt properties (properties larger than 500m2 in which the floor area ratio used equals zero); underused properties (larger than 500m2 in which the floor area ratio used is lower than the required minimum; unutilized properties (building and other properties with at least 60% of its built area vacant for more than one year).

Then, owners will have up to one year to address a project for their properties not built or underused. The second alternative is to present actions to comply with the social function of the city (in case of properties that are abandoned or not used). In new buildings (properties not built or underused), the owner will still have two years to start the works and five years to complete them. After five years, the progressive taxation overtime may be charged, with the rate on the property doubling each year, up to a limit of 15% of the property's value. Finally, after five years of progressive tax collection, the Municipality may proceed with the expropriations.

Here we will analyze the effectiveness of PEUC as one of the Master Plan's strategies to boost ZEIS 3 effectiveness. According to Article 91 of Municipal Law N° 16,050/2014, ZEIS 2, 3, and 5 are the priority areas for applying such instruments[7].

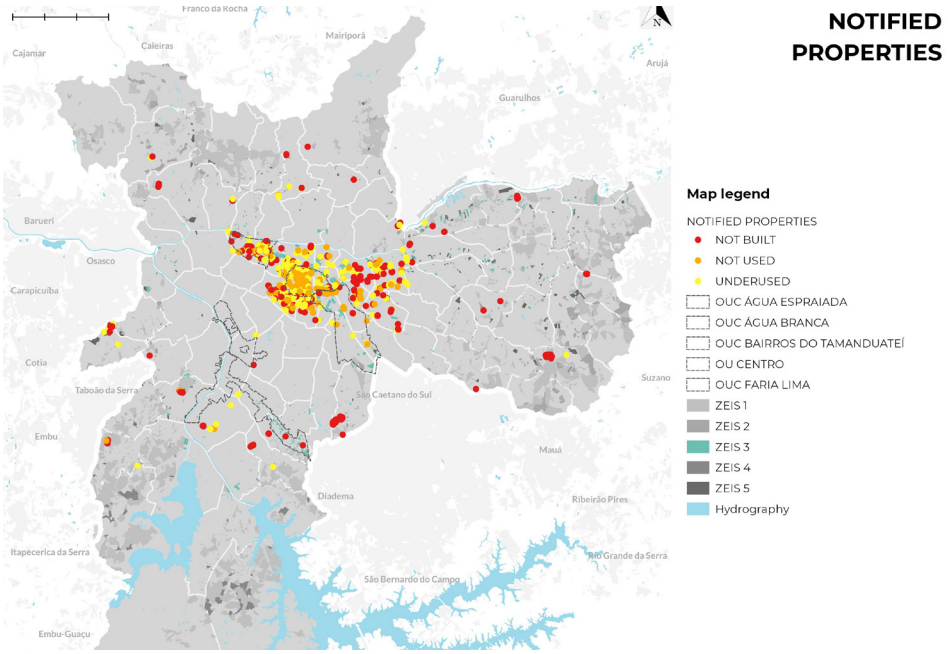
7. Also included as priority areas for applying the PEUC instrument: CenterUrban Operation and other Consortiated Urban Operations; the Urban Transformation Structuring Axes, mainly Avenida Santo Amaro; and, more recently, the whole area regarding Se and Mooca boroughs.

The PEUC notification is made with cross-sectional data on the demarcations of ZEIS and Urban Operations from the fiscal register of the Secretariat of Finance. It crosses the land areas with the built-up area, providing the data to identify underutilized and unbuilt properties. However, there is a lack of reliable databases, except for a study carried out by FUPAM on underutilized properties. Moreover, identifying underutilized properties is challenging for the city hall by having a small technician team carry out inspections[8]. Data provided by municipal councils and social organizations and the Collaborative Map of the Social Function of Property[9] implemented by the city in the 2013-2016 administration also help guide inspections. The following map shows the location of notified properties.

8. Information was provided by Camila Nastari, then an employee of the Municipal Secretariat for Urban Development of the Municipality of São Paulo, in an interview carried out in 2017.

9. Available at: https://mapacolaborativo.gestaourbana.prefeitura.sp.gov.br/funcao-social/.

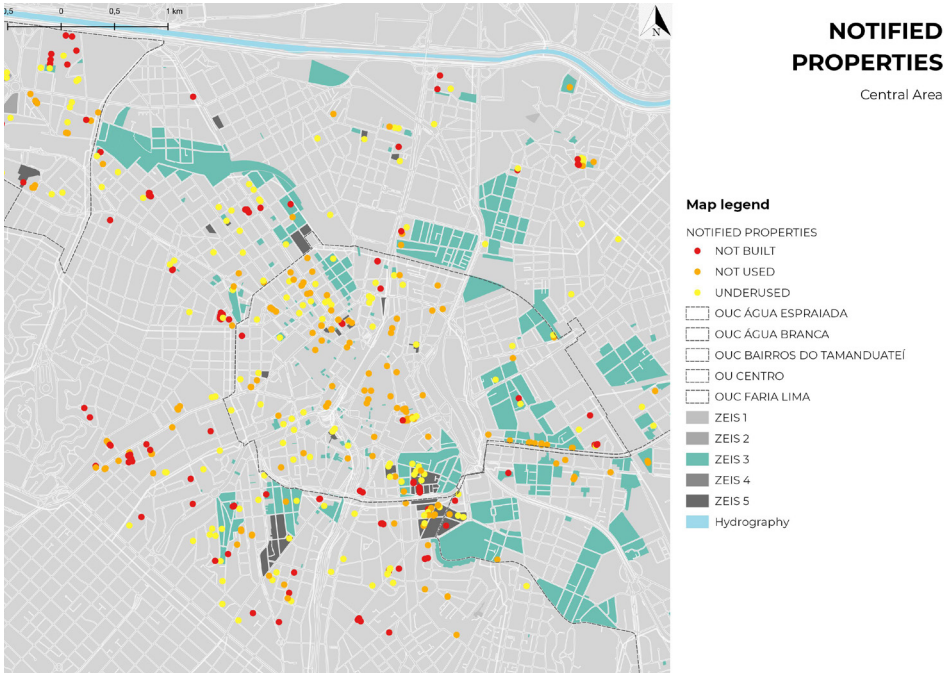
Figure 6.6 **Location of properties notified by PEUC instrument and ZEIS areas**
Source: Prepared by Simone Gatti and Marina Marques, from 2014-2020 data.



According to the map below 120 properties were notified within ZEIS 3 (out of the 749 existing perimeters). In comparison, 329 properties were notified within ZEIS 5 and 941 outside ZEIS, as shown in the map below. Therefore, it is possible to see the low incidence of ZEIS 3 areas notified by the PEUC instrument.

The municipal government's explanation for the low incidence of notifications is mainly due to the ZEIS 3 main characteristics. Inside ZEIS 3, abandoned buildings or irregularly used ones (such as tenements) are commonly present. Such properties are precisely the ones that are not registered on a reliable database, depending on inspections and data crossings to be identified. Thus, buildings occupied by housing movements, for example, or illegally occupied, are not notified as they are even if at irregular use. Irregular use

Figure 6.7
Location of properties notified by PEUC instrument and ZEIS areas in downtown
Source: Prepared by Simone Gatti and Marina Marques, from 2014-2020 data.



is not reasonable for notifications. Besides, adopting such behavior helps City Hall not legitimize repossession actions, because they go against the right to housing premises. However, among the 941 properties notified outside ZEIS, 493 correspond to unbuilt properties within the Center Urban Operation (In Portuguese: Operação Urbana Centro) perimeter. They configure empty properties, identified as such during pilot of inspections carried out around Glicério Street.

These data show us how the existing instruments to guarantee the property's social function need to be articulated with a specific housing policy to combat

Table 6.10
Properties notified by PEUC instruments within and outside special zones of social interest (ZEIS)
Source: Prepared by Simone Gatti and Marina Marques, from City Hall reports (July 2020).

Properties notified by PEUC instruments within and outside ZEIS

ZEIS	LOCATION	UNDERUTILIZED PROPERTIES	UNUTILIZED PROPERTIES	UNBUILT PROPERTIES	NOTIFIED PROPERTIES – SUBTOTAL	TNOTIFIED PROPERTIES – SUBTOTAL	TOTAL PERIMETERS LM 16.402/16*
ZEIS 2	U.O. ÁGUA BRANCA/ ZEIS 2	1	0	0	1	79	493
	U.O. TAMANDUATEÍ NEIGHBORHOODS/ ZEIS 2	1	1	0	2		
	ZEIS 2	11	0	65	76		
ZEIS 3	U.O. CENTRO / ZEIS 3	10	20	1	41	120	749
	U.O. ÁGUA BRANCA / ZEIS 3	1	0	0	1		
	U.O. ÁGUA ESPRAIADA / ZEIS 3	0	0	2	2		
	U.O. TAMANDUATEÍ NEIGHBORHOODS/ZEIS 3	2	19	4	25		
	ZEIS 3	14	10	27	51		
ZEIS 5	U.O. CENTRO/ZEIS 5	11	60	12	83	329	368
	U.O. ÁGUA BRANCA/ ZEIS 5	0	0	1	1		
	U.O. TAMANDUATEÍ NEIGHBORHOODS/ZEIS 5	2	1	1	4		
	ZEIS 5	15	12	214	241		
OUTSIDE ZEIS	U.O. CENTRO	33	493	16	542	941	N. A.
	U.O. ÁGUA BRANCA	17	13	23	53		
	U.O. TAMANDUATEÍ NEIGHBORHOODS	1	3	1	5		
	BOROUGH MOOCA	44	18	101	163		
	BOROUGH SÉ	58	39	81	178		

housing precariousness in these places. The lack of this action policy focused on the ZEIS perimeters can contribute to the maintenance of the existing instability of housing and the properties' idleness. After all, the private market will hardly undertake land earmarked as ZEIS 3 due to the minimum requirements for low-income social housing type 1 (HIS 1).

Considering this scenario, the new Master Plan reinforces the government's role as a social-housing promoter within ZEIS perimeters. Its role helps reverse the 2002 plan common sense, which had transferred the responsibility for providing social housing to the private market. Thus, it remains for us to conjecture how and which housing programs defining ZEIS will fulfill their role as an instrument for democratizing access to land.

City Hall's commitment must support that social housing will not depend on housing financing but on a public stock that provides access to housing without ownership changes. In addition, helps to remain the poorest in areas under real estate appreciation.

What makes São Paulo stand out from other Brazilian cities that have applied the PEUC is the large-scaled notifications. However, especially regarding unbuilt and unused properties imply significant challenges in distinguishing the lack of use, transparency actions, and creation of an exclusive dealing department.

By the end of Fernando Haddad's administration (2013-2016), the Municipal Government had registered 2,223 properties and notified 1,330. During legislative years 2017-2020 (João Dória – Bruno Cova's administration), registration and notification of new unbuilt, unused, and underutilized properties significantly decreased. In 2019, registrations were retaken.

According to data published in City Hall's annual reports, in 2017, 28 properties were registered, 5 in 2018, and 177 properties in 2019. Thus, the number of properties notified at the beginning of Dória-Covas's administration dramatically dropped from 58 in 2017 to 7 in 2018. In 2019, they increased to 232 properties. The city's explanation for decreasing registrations between 2017 and 2018 was they must enhance a methodology and assessment diagnosis. Additional goals were improving procedural management and monitoring and prospect new areas of activity.

Concerning properties taxed by the progressive rate, the numbers dropped from 720 (2017) to 492. According to the City Hall, the number decreased after confirming compliance with the duty to use, build or divide part of the notified properties.

One of the fundamental points about PEUC's analysis concerns establishing the Municipality's strategies for social housing, especially within the City Centre Urban Operation perimeter. This region gathers a large part of registered properties. Therefore, it becomes crucial to set Municipality's strategies and integrate urban development policies with housing policies.

In 2021, the first group of properties that completed a 5-year progressive charging became available for expropriation. However, by the end of 2020, the City Hall was unable to issue court orders in compliance with the National Treasury Secretariat regulations. Therefore, the City Hall needed to demand a formal request to the Federal Government to carry out expropriations at least one year before. Then, a solution to enabling social housing in properties notified could happen by using other instruments that induced the social function of property. For example, as Real Estate Consortium and Payment Action, planning tools are still not institutionalized by municipal management.

In a nutshell, the PEUC instrument fulfills its social function, at least partially, if considering that the act of notification has already enabled employing a portion of properties into social-oriented housing. In 2019, 180 projects had been presented, 100 out of them within ZEIS, and 105 properties underused had fulfilled their social function. However, the objectives were hampered by the lack of continuity of registration and notification in 2017 and 2018. In addition, there is still a weakness in the absence of a housing policy for properties that will meet the five-year tax progressive collection in 2021.

The intentions of applying PEUC as a strategy to succeed ZEIS 3 were poorly achieved due to the low incidence of properties notified within ZEIS. Mainly due to the high incidence of occupied and non-notifiable properties therein. Besides, due to the lack of articulation between the Housing and Urban Development secretariats in planning properties collected with public debt bonds.

Resources Application from the Urban Development Fund (FUNDURB) within ZEIS 3

The Municipal Urban Development Fund (FUNDURB) aims to finance investments following the municipal Targets Plan and the guidelines established by the 2014 Master Plan. The fund has many sources, including transfers from the Union or the State Government and income from the investment of its own assets, loans from internal or external financing. However, the primary source of funds is the Additional Building Rights Levy; and selling air rights in regions where the floor area ratio is higher than the required maximum.

The review of São Paulo's Master Plan in 2014 made it possible to increase resources collected by FUNDURB. It stipulated a basic coefficient for the entire city (equal to 1), ensuring that all developments above this limit contribute to financing in the collective interest. As a result, FUNDURB operates a redistributive rather than cumulative system,

aiming to optimize the allocation of resources everywhere in the city. Besides, it assures priority investments in social housing, public transport, urban facilities, public spaces, and green areas protection of the heritage.

Article 340 of the 2014 São Paulo Master Plan determined that at least 30% of the resources collected by FUNDURB are destined to acquire land for delivering social housing, preferably within ZEIS 3. As a result, a survey examined the FUNDURB resources allocation to verify whether the ZEIS 3 is an urban policy object and how such resources have been invested[10].

A database provided by the City Hall on the Approved Project Monitoring (Portuguese: *Acompanhamento de Projetos Aprovados*) portal displays the location where resources are being used. However, it was not possible to accurately acknowledge whether the land expropriation process was paid off or not and whether its destination was finished. In addition, there were cases of alteration/transfer of resources from one land to another that are also not registered in the database. As a result, it required a careful review of the application of FUNDURB resources based on the available data.

Even so, georeferenced data present a historical analysis from 2013 to 2018. As a result, points out the extent within ZEIS 3 from 2015, possibly influenced by the 2014 Master Plan. We carried out two mappings, a general one, which considers all commitment sources, and another from the Municipal Housing Secretariat, the department responsible for housing production.

Comparing both points towards a greater concentration of FUNDURB resources in the most central areas from 2016 onwards and a low territorial incidence related to other Municipality's demands. However, this survey needs to consider the amounts used and their destinations, which can be analyzed by reading the annual tables of FUNDURB by area.

10. In October 2019, this decision was changed by the approval of Law 17,217/19 (PL 513/2019). The law determines the percentage of resources for land acquisition and 'social interest housing projects.' However, the period investigated does not does not include such a change. So, our analysis is based on the original 2014 Master Plan's goals.

Figure 6.8 **Location of projects approved by FUNDURB and ZEIS areas**
Source: Prepared by Simone Gatti and Marina Marques, based on FUNDURB reports (2013 to 2018) data.

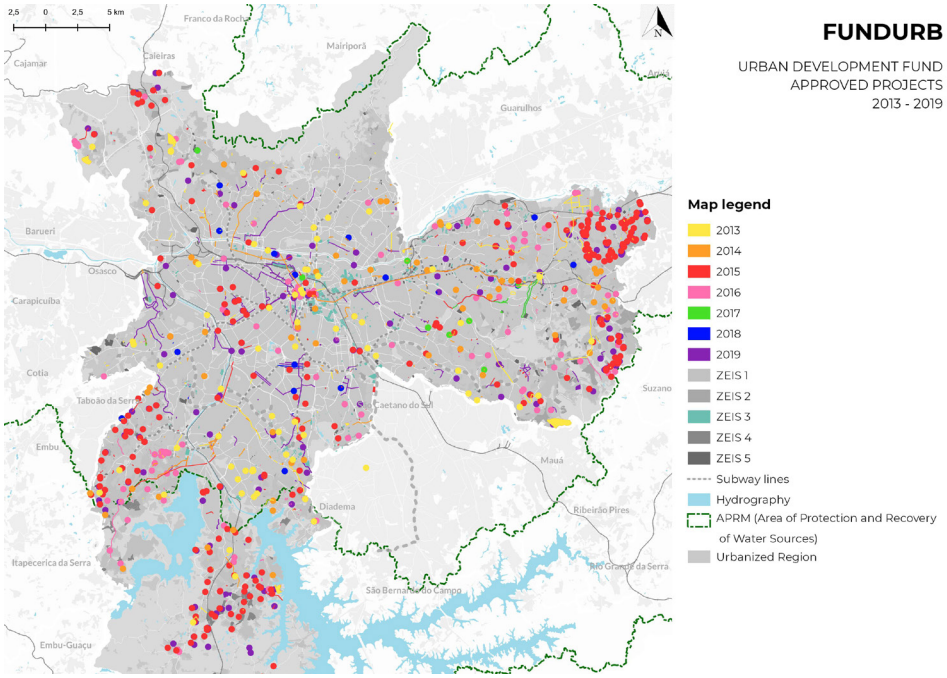
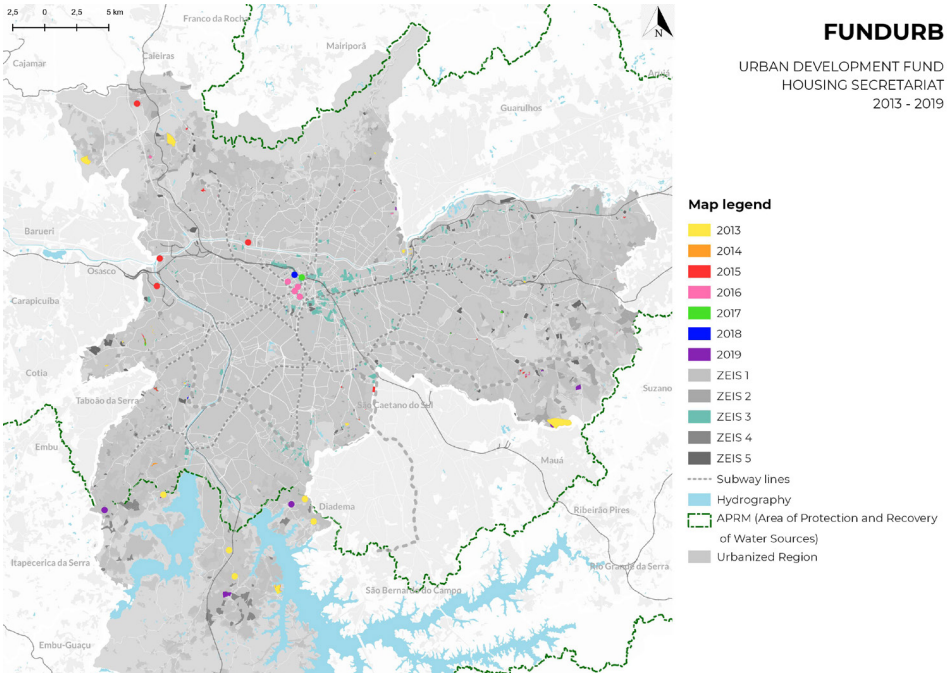


Figure 6.9 **Location of projects approved by the Housing Secretariat in FUNDURB and ZEIS areas** Source: Prepared by Simone Gatti and Marina Marques, based on FUNDURB reports (2013 to 2018) data.



We analyze below the data of investments surveyed by the Housing Secretariat from 2013 to 2018. We highlight the contributions of resources within the ZEIS areas, especially ZEIS 3. In 2013 and 2014, there was no FUNDURB resource by SEHAB undertaken to ZEIS 3; all investments were concentrated within ZEIS 1.

Table 6.11 **Data on investments using FUNDURB by the Housing Secretariat (SEHAB) in 2013**
Source: Prepared by Simone Gatti and Marina Marques, based on a City Hall report (2013).

FUNDUNB SEHAB 2013			
DEVELOPMENT	**DESCRIPTION**	**VALUE**	**ZEIS**
Loteamento Santa Casa [Jardim Hebron]	elimination of geotechnical risk, rainwater drainage, geometric alignment of paving routes, guides, and gutters	R$ 1,331,888.15	ZEIS 1
Sítio Itaberaba II	elimination of geotechnical risk, rainwater drainage, geometric alignment of paving routes, guides, and gutters	R$ 3,987,587.55	ZEIS 1
Parque das Flores/ Jardim Continental	Elimination of geotechnical risk, rainwater drainage, geometric alignment of paving routes, guides and gutters, and green areas and spaces for public use.	R$ 5,127,468.88	ZEIS 1
Paraisópolis [3ª etapa]	urbanization services and works, community equipment, the channeling of streams, and new housing units.	R$ 6,964,095.67	ZEIS 3
Jardim Nova Vitória/Cooperativa Jacu-pêssego	elimination of geotechnical risk, rainwater drainage, geometric alignment of paving routes, guides, and gutters	R$ 1,256,718.26	ZEIS 1
[lote d] Chácara Bela Vista [3Rs]	execution of services for the renovation and revitalization of housing projects.	R$4,556,335.98	ZEIS 1
[lote d] Chaparral/Tiquatira [3Rs]	execution of services for the renovation and revitalization of housing projects.	R$ 4,556,335.98	ZEIS 1
[lote d] Chaparral [3Rs]	execution of services for the renovation and revitalization of housing projects.	R$ 4,556,335.98	ZEIS 1
[lote d] Goiti [3Rs]	execution of services for the renovation and revitalization of housing projects.	R$ 4,556,335.98	ZEIS 1
[lote c] City Jaraguá [3Rs]	land and commercial regularization, recovery of credits from fees related to permission to use houses and revitalization of buildings and common areas.	R$ 3,204,884.99	ZEIS 1
[lote b] José Paulino [3Rs]	land and commercial regularization, recovery of credits from fees related to permission to use houses and revitalization of buildings and common areas.	R$ 1,576,914.93	ZEIS 1

continuation Table 6.11 **Data on investments using FUNDURB by the Housing Secretariat (SEHAB) in 2013** Source: Prepared by Simone Gatti and Marina Marques, based on a City Hall report (2013).

DEVELOPMENT	DESCRIPTION	VALUE (R$)	ZEIS
[lote b] Campo Grande [3Rs]	execution of services for renovating and revitalizing housing projects.	R$ 1,576,914.93	ZEIS 1
[lote a] São Domingos 4 e 7 [3Rs]	execution of services for renovating and revitalizing housing projects.	R$ 2,534,418.01	ZEIS 1
[lote a] São Domingos 1 e 9 [3Rs]	execution of services for renovating and revitalizing housing projects.	R$ 2,534,418.01	ZEIS 1
[lote a] Jardim do Lago [3Rs]	execution of services for renovating and revitalizing housing projects.	R$ 2,534,418.01	ZEIS 1
[lote a] Jardim Arpoador [3Rs]	execution of services for renovating and revitalizing housing projects.	R$ 2,534,418.01	ZEIS 1
lote 1 Pabreu/ Prainha [Programa Mananciais]	Execution of infrastructure works to recover the Guarapiranga and Billings basins, promoting sanitation, paving, and urbanism networks.	R$ 6,499,875.96	ZEIS 1
lote v Fase 3 [Programa Mananciais]	Execution of infrastructure works to recover the Guarapiranga and Billings basins, promoting sanitation, paving, and urbanism networks.	R$ 477,089.61	ZEIS 1
lote iv Fase 3 [Programa Mananciais]	Execution of infrastructure works to recover the Guarapiranga and Billings basins, promoting sanitation, paving, and urbanism networks.	R$ 1,952,184.67	-
lote ii Fase 3 [Programa Mananciais]	Execution of infrastructure works to recover the Guarapiranga and Billings basins, promoting sanitation, paving, and urbanism networks.	R$ 639,486.13	ZEIS 1

Table 6.12 **Data on investments using FUNDURB by the Housing Secretariat (SEHAB) in 2014**
Source: Prepared by Simone Gatti and Marina Marques, based on a City Hall report (2014).

FUNDUNB SEHAB 2014			
DEVELOP-MENT	**DESCRIPTION**	**VALUE (R$)**	**ZEIS**
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot a]	R$ 1,479,827.99	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot b]	R$ 5,748,552.50	ZEIS 1
xxx	land and commercial regularization, recovery of credits from fees related to permission to use houses and revitalization of buildings and common areas.	R$ 1,095,203.78	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot b]	R$ 5,748,522.55	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot d]	R$ 6,507,023.11	ZEIS 1
xxx	execution of works for the slum upgrading program, lot 1. value settled	R$ 15,249,151.30	ZEIS 1
xxx	elimination of geotechnical risk, rainwater drainage, geometric alignment of paving routes, guides and gutters, and green areas and spaces for public use.	R$ 7,751,733.02	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot b]	R$ 5,748,552.55	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot a]	R$ 1,479,827.99	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot a]	R$ 1,479,827.99	ZEIS 1
xxx	elimination of geotechnical risk, rainwater drainage, geometric alignment of paving routes, guides and gutters	R$ 7,902,728.98	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot a]	R$ 1,479,827.99	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot d]	R$ 6,507,023.11	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot d]	R$ 6,507,023.11	ZEIS 1
xxx	execution of services for the renovation and revitalization of housing projects. total amount settled [lot d]	R$ 6,507,023.11	ZEIS 1
xxx	execution of works services for the sanitation, environmental protection, and water quality recovery program in degraded areas of water sources in the Guarapiranga and Billings basins.	R$ 2,602,028.93	ZEIS 1

Table 6.13 **Data on investments using FUNDURB by the Housing Secretariat (SEHAB) in 2015**
Source: Prepared by Simone Gatti and Marina Marques, based on a City Hall FUNDURB report (2015).

FUNDUNB SEHAB 2015			
DEVELOPMENT	**DESCRIPTION**	**VALUE (R$)**	**ZEIS**
Viela da Paz	urbanization services and works, stream channeling and new housing units in condominiums B, C	R$ 763,340.33	ZEIS 1/ ZEIS 2
Residencial Vale das Flores (Barra do Jacaré) (Casa Paulistana)	works for the construction of 592 affordable housing for the barra do jacaré housing project	R$ 11,840,000.00	ZEIS 1
Sítio Itaberaba II	continuity of the paving works of 7% of the streets, construction of 116 linear meters of retaining walls, execution of 62 linear meters of drainage network and execution of 18% of earthworks	R$ 601,231.92	ZEIS 1
Campo das Pitangueiras (aquisição de terras)	expropriation for construction HIS	R$ 853,745.46	ZEIS 2
Manuel Bueno (aquisição de terras)	expropriation for construction HIS	R$ 4,510,807.00	ZEIS 2
Abrahão Calux (aquisição de terras)	expropriation for construction HIS	R$ 13,477,377.25	ZEIS 5
Forte do Ribeira (aquisição de terras)	expropriation for construction HIS	R$ 12,543,693.74	ZEIS 2
Phobus (aquisição de terras)	expropriation for construction HISS	R$ 12,498,099.83	ZEIS 2
Antonio Sampaio (aquisição de terras)	expropriation for construction HIS	R$ 2,246,204.64	ZEIS 2
João Gomes (aquisição de terras)	expropriation for construction HIS	R$ 1,513,042.00	ZEIS 2
Conselheiro Crispiano (Casa Caulistana)	execution of the housing project, funding for the Minha Casa Minha Vida program entities [PMCMV/E] [unification of slum and housing struggles]	R$ 566,294.06	ZEIS 3
Casarão do Carmo	construction of housing units	R$ 582,883.02	ZEIS 3
Amaro de Pontes (aquisição de terras)	land to be used as an environmental compensation area for the “jardim roschel” subdivision	R$ 192,741.07	-
Residencial Jabuticabeiras (Casa Paulistana)	execution of the housing project, funding for the Minha Casa Minha Vida program entities [PMCMV/E] [forum of tenements and homeless from sao Paulo]	R$ 10,967,393.11	ZEIS 1
Cícero Canuto (aquisição de terras)	expropriation for construction HIS	R$ 13,168,589.68	ZEIS 2
Forte Rio Branco ii (aquisição de terras)	expropriation for construction HIS	R$ 4,169,205.87	ZEIS 2
Forte do Rio Negro (aquisição de terras)	expropriation for construction HIS	R$ 4,215,886.00	ZEIS 2
Ancheira (aquisição de terras)	expropriation for construction HIS	R$ 4,124,597.00	ZEIS 2

continuation Table 6.13 **Data on investments using FUNDURB by the Housing Secretariat (SEHAB) in 2015** Source: Prepared by Simone Gatti and Marina Marques, based on a City Hall FUNDURB report (2015).

DEVELOPMENT	DESCRIPTION	VALUE (R$)	ZEIS
Parque da Flores / Jardim Continental	elimination of geotechnical risk, rainwater drainage, geometric alignment of roads for paving, curbs and gutters, and also the creation of green areas and spaces for public use	R$ 1,241,996.72	ZEIS 1
Sapé B	urbanization services and works, stream channeling and new housing units	R$ 1,471,242.26	ZEIS 1
Campor Grande / Parque Otero [3Rs]	execution of services for the qualification of housing projects and permanent services for issuing the license of the fire department [campo grande, josé paulino e parque otero]	R$ 168,050.72	ZEIS 1
Paraisópolis [3ª Etapa]	urbanization services and works, community facilities, plumbing streams and new housing units urbanization services and works, plumbing, linear park, social facilities and new housing units	R$ 1,750,896.59	ZEIS 3
Heliópolis Gleba K/ Sabesp 1 / Estrada das Lágrimas	urbanization services and works, trunk collector, linear park and new housing units	R$ 289,195.05	ZEIS 2
Heliópolis Gleba H/ Sabesp 2	urbanization services and works, trunk collector, linear park and new housing units - settled value	R$ 1,781,249.46	-
Jardim Roschel	slum upgrading services, grouping ii and iii public square	R$ 9,935.52	ZEIS 1
Diogo Pires	continuity of execution towers f1 and f2 and blocks d1, d2, e, f and condominium infrastructure [water, sewage and drainage networks, paving and landscaping] and interconnection of the existing Sabesp water network [aqueduct] - otal amount settled	R$ 381,984.41	ZEIS 1
Ponte dos Remédios	condominium infrastructure [water, sewage and drainage networks, paving and landscaping] and interconnection of the existing Sabesp water network [aqueduct] - total amount settled [ponte dos remédios/ diogo pires]	R$ 381,984.41	ZEIS 3

ZEIS 3 began receiving FUNDURB resources in 2015, this year in which there was a significant allocation of efforts to ZEIS 2. However, the 2015 resources for land acquisition are used only in ZEIS 2, totaling about R$ 58 million reais in 10 land plots. There is also 1 land expropriated for social housing in ZEIS 5 in the amount of R$ 13 million. Investments in ZEIS 3 are concentrated in 4 areas, all used for infrastructure works and housing production. The values are shallow concerning the other ZEIS, totaling around R$ 3 million only.

In 2016, the resources were better distributed among the ZEIS with 4 lands acquired within ZEIS 2 - R$ 12 million, 1 building acquired within ZEIS 5 - R$ 3.3 million. In ZEIS 3, 1 land and 1 building were acquired, totaling R$ 11 million. The rest of the resources were spent on housing production under the *Minha Casa, Minha Vida* Program and urbanization and infrastructure, with R$ 5 million within ZEIS 3.

In 2017, the acquisition of land in ZEIS 3 appeared in purchasing a single building, Edifício Mauá, for R$ 5.4 million (which, in fact, cost R$ 24 million for the city, possibly used resources from other sources). On the other hand, R$ 13.3 million were spent on ZEIS 2 for 2 lots. The rest was spent on housing production and the urbanization of slums in different city areas.

The year 2018 is when the ZEIS 3 areas most appeared on the FUNDURB expenditure list. Six acquisitions completed R$ 28.5 million. There were also 2 more acquisitions outside ZEIS for R$ 8 million and 1 expropriation within ZEIS 2 for R$ 12.7 million. The resources left were used for housing provision in other areas.

Assessing such data allows us to identify a minimal number of ZEIS 3 perimeters that have earned FUNDURB resources over the past six years. For example, the map below displays an approximation of the central area where most of the ZEIS 3 boundaries are located. As a result, we visualize the low incidence of FUNDURB resources therein.

Table 6.14 **Data on investments using FUNDURB by the Housing Secretariat (SEHAB) in 2016**
Source: Prepared by Simone Gatti and Marina Marques, based on a City Hall FUNDURB report (2016).

FUNDUNB SEHAB 2016

DEVELOPMENT	DESCRIPTION	VALUE (R$)	ZEIS
Nossa Senhora Aparecida	construction of 180 social housing units in the Solidarity Credit Program	R$ 4,330,416.50	-
Maria Domitila (Casa Paulistana)	construction of 245 social housing units in the Minha Casa Minha Vida Program	R$ 4,899,415.52	ZEIS 3
José Dias	acquisition of land for implantation of his	R$ 9,224,861.26	ZEIS 3
Heliópolis Gleba H/ Sabesp 2	urbanization and construction of housing units. delivery of 240 HU condominium 2	R$ 10,680,000.00	-
Forte do Rio Branco III	acquisition of land for implantation of HIS	R$ 4,224,776.47	ZEIS 2
Forte do Rio Branco I	acquisition of land for implantation of HIS	R$ 4,341,483.99	ZEIS 2
Fernão Dias	acquisition of land for implantation of HIS	R$ 1,406,053.30	ZEIS 2
Edifício Ipiranga (Casa Paulistana)	program casa paulistana to enable the execution of 120 UH of social interest in the Minha Casa Minha Vida program	R$ 465,301.55	ZEIS 3
Dom José I (Casa Paulistana)	program casa paulistana to enable the execution of 200 UH of social interest in the Minha Casa Minha Vida program	R$ 908,080.00	ZEIS 1
Curuçá 1 (Casa Paulistana)	construction of 97 social housing units in the Minha Casa Minha Vida program	R$ 2,318,578.29	-
Tupã (Casa Paulistana)	construction of 228 social housing units in the Minha Casa Minha Vida program	R$ 2,280,000.00	ZEIS 2
Campo das Pitangueiras)	acquisition of land for implantation of HIS	R$ 2,155,000.00	ZEIS 2
Tiradentes 5 (Casa Paulistana)	construction of 39 social housing units in the Minha Casa Minha Vida program	R$ 605,703.64	ZEIS 1
Alexios Jafet A, B, C, D, E (Casa Paulistana)	program casa paulistana for the construction of 1104 HUs of social interest in the Minha casa Minha Vida program	R$ 22,080,000.00	ZEIS 1/ ZEIS 2
Sítio itaberaba II	infrastructure, geotechnical consolidation for risk elimination, drainage network, paving and demolition	R$ 7,800,000.00	ZEIS 1
Sapé B	urbanization and construction of housing units. delivery of 87 HU at condominium f - acquisition of building for implantation of his	R$ 5,700,000.00	ZEIS 1
Prédio São João	building acquisition for implantation of HIS	R$ 1,427,592.00	ZEIS 3

Table 6.15 **Data on investments using FUNDURB by the Housing Secretariat (SEHAB) in 2017**
Source: Prepared by Simone Gatti and Marina Marques, based on a City Hall FUNDURB report (2017).

FUNDUNB SEHAB 2017			
DEVELOPMENT	**DESCRIPTION**	**VALUE (R$)**	**ZEIS**
Viela da Paz - Condomínio D [Aquisição de Imóveis]	Acquisition of land for HIS implementation	R$ 2,802,495.86	ZEIS 1 ZEIS 2
Pai Menino/Anchieta [Aquisição de Imóveis]	Acquisition of land for HIS implementation	R$ 10,080,132.75	ZEIS 2
Forte da Ribeira [Aquisição de Imóveis]	Acquisition of land for HIS implementation	R$ 390,468.72	ZEIS 2
Viela da Paz/ Domenico Martinelli	Favela Urbanization and Regularization of Precarious Subdivisions	R$ 974,155.70	ZEIS 1 ZEIS 2
Sitio Itaberaba II	Favela Urbanization and Regularization of Precarious Subdivisions	R$ 2,215,947.37	ZEIS 1
Sapé B	Favela Urbanization and Regularization of Precarious Subdivisions	R$ 3,244,329.36	ZEIS 1
Heliópolis [Sabesp 2]	Favela Urbanization and Regularization of Precarious Subdivisions	R$ 8,196,001.37	-
Nossa Senhora Aparecida [Aporte Casa da Família]	Construction of 180 HU	R$ 4,430,416.00	-
Parque das Flores/Jardim Cont inental	Favela Urbanization and Regularization of Precarious Subdivisions	R$ 1,287,174.83	ZEIS 1
Tupã [Aporte Casa da Família]	Construction of 228 HU	R$ 1,718,000.00	ZEIS 2
Safira [Aporte Casa da Família]	Construction of 652 HU	R$ 9,520,000.00	ZEIS 5
Fluorita I e II [Aporte Casa da Família]	Construction of 308 HU	R$ 3,080,000.00	ZEIS 5
Edifício Mauá [Aquisição de Imóveis]	Acquisition of land for implantation of HIS.	R$ 5,403,820.07	ZEIS 5

Table 6.16 **Data on investments using FUNDURB by the Housing Secretariat (SEHAB) in 2018**
Source: Prepared by Simone Gatti and Marina Marques, based on a City Hall FUNDURB report (2018).

FUNDUNB SEHAB 2018			
DEVELOPMENT	**DESCRIPTION**	**VALUE (R$)**	**ZEIS**
Viela da Paz	Construction of Housing Units of Social Interest	R$ 10,436,367.89	ZEIS 1 / ZEIS 2
São João, 588	Properties acquisition	R$ 7,411,139.00	-
Sabesp 2	Construction of Housing Units of Social Interest	R$ 25,396,216.06	-
Rua José Bonifácio, 383	Properties acquisition	R$ 9,355,643.00	ZEIS 3
Rua General Rondon, 58	Properties acquisition	R$ 5,780,000.00	ZEIS 3
Rua Catumbi, 588	Properties acquisition	R$ 3,891,115.41	ZEIS 3
Rua Aurora, 515/519	Properties acquisition	R$ 5,553.59	-
Praça da Bandeira, 31	Properties acquisition	R$ 6,582,294.50	ZEIS 3
Paraisópolis Sanfona	Construction of Housing Units of Social Interest	R$ 4,923,872.96	ZEIS 1
Heliópolis Gleba G - condomínio B	Production of Social Interest Housing	R$ 1,675,829.45	ZEIS 1
Forte do Rio Branco I	Expropriation for construction of HIS	R$ 12,705,487.10	ZEIS 2
Flávio Maurano	Expropriation for construction of HIS	R$ 6,764.70	ZEIS 3
Bamburral	Continuity of the execution of units Blocks A and B and Blocks B and C; and condominium infrastructure (water, sewage and drainage networks, paving and landscaping)	R$ 27,087.36	ZEIS 1

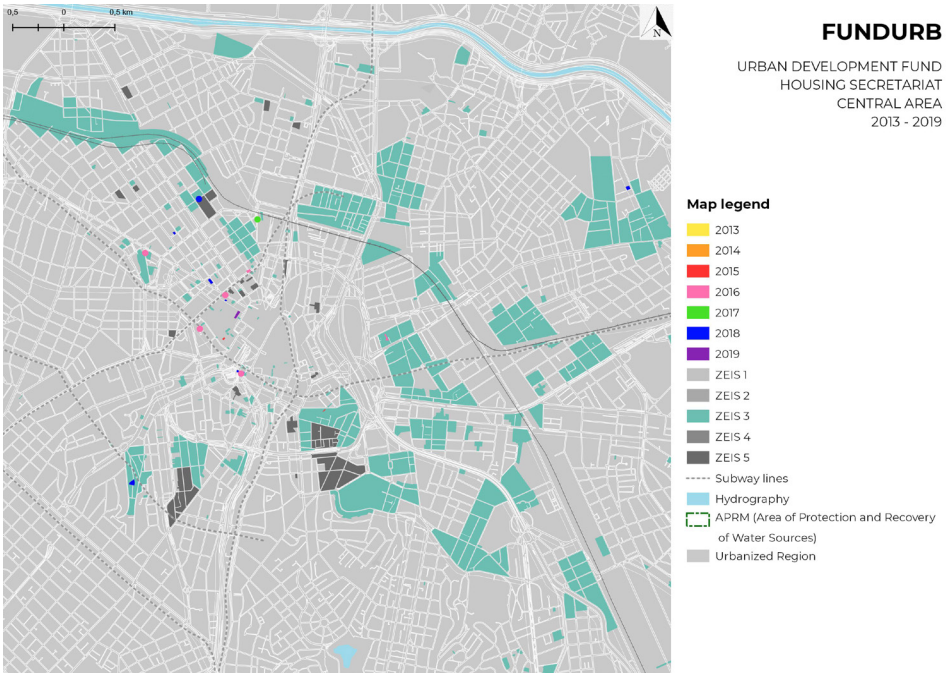


Figure 6.10
Location of Housing Secretariat investments using FUNDURB resources in Downtown
Source: Prepared by Simone Gatti and Marina Marques, based on FUNDURB reports (2013 to 2018) data.

We see only 15 areas comprising 478 perimeters, totaling around R$ 45 million for the acquisition of land or buildings and around R$ 8 million for housing provision. This analysis, to be consummate, must also be done in comparison with the total expenditures of FUNDURB and its targeting. This requires specific research on the fund; however, some conjectures are subject to reflection.

The collection through charging the Additional Building Rights Levy (in Portuguese: Outorga Onerosa do Direito de Construir, OOCD) has grown exponentially since 2018. According to the monthly public report, in July 2019, fundraising broke the record, reaching up R$ 67 million in a single month. In 2018, the total amount collected was R$ 421 million, compared to R$ 232 million in 2017. Considering the year 2018 as a base, 30% would be equivalent to R$ 126 million, which should have been reserved for land acquisition, preferably within ZEIS 3,

as defined in article 340 of the Strategic Master Plan in force. However, only R$ 28 million were spent on land acquisition within ZEIS 3 that year, i.e., 22% of the amount stipulated by law.

Below is the table prepared by the City Hall when assessing the application of the Master Plan since its beginnings.

Although the Master Plan has determined 30% 'preferably' within ZEIS 3 and not 'mandatory,' and that an evaluation of the use of FUNDURB as a whole is necessary in view of all the other expenses and needs of the municipality, it is worth noting that such strategies to enable the housing provision in the ZEIS 3 area are not effectively happening.

Table 6.17
Settlement of FUNDURB financial resources for the Social Housing Policy, in relation to the amounts collected in the period between 2014 and 2018
Source: Gestão Urbana, São Paulo, 2019.

Year	Resources raised by FUNDURB (R$)	Resources used to buy land for HIS (R$)*	Percentage of resources used in relation to those collected*
2014	227,562,823.10	-	-
2015	265,504,393.48	75,459,101.04	28.4%
2016	231,396,111.72	69,418,833.52	30.0%
2017	231,952,509.95	38,606,845.64	16.6%
2018	421,413,891.51	21,619,351.80	5.2%
TOTAL	**1,377,829,729.76**	**205,104,132.00**	**14.9%**

* According to Art. 340, paragraphs 1 and 2 of Municipal Law nº 16,050/2014, if at least 30% of the resources for the acquisition of land for the production of social housing are not executed in the current year, this amount will remain reserved for this purpose for a period of 2 years .

FINAL CONSIDERATIONS

Findings along this chapter showed that the Compulsory Parceling, Building and Utilization (PEUC) has not helped amplify the Special Zones of Social Interest (ZEIS 3) yet. Most land therein is already busy. They are home to many tenements and poverty-stricken occupations that require additional housing policies to upgrade than the ones carried out by the PEUC instrument. The Urban Development Fund (FUNDURB) resources have been used within the ZEIS 3 far below what was expected by the Master Plan. Furthermore, housing stock within ZEIS 3, both public and private, has also been trifling. As a result, these areas remain far from getting adequate urbanization. Neither the government nor the real estate market can provide housing sighted at this target audience. Moreover, because the few housing units are offered solely via housing financing, they will hardly be reserved for the poorest families. They are likely to risk being traded on the free-unregulated market and passed on to higher-income families in a short-term period. Therefore, it is crucial to rethink intervention strategies in ZEIS 3, claiming the policy regulatory framework support.

Another critical analysis point is a disproportionate quantity of HIS 2 type units built by the private market outside ZEIS, using benefits, such as the exception from paying addition building rights fees. This production still meets a free demand, without any commitment to the existing housing vulnerability or to the registered families that have been waiting for decades for the possibility of access to public housing. Supposing there are public benefits and subsidies destined for this housing production. Should not they be aligned to serving those who make up 70% of the municipal housing deficit?

During the 2014 Master Plan, more than 600 HIS 2 type developments failed to pay the additional building rights fees, substantially impacting the urban fund's collection. Therefore, around 600 projects were delivered with no demand control and were freely traded through self-declaration of income. As a result, residential units can be sold at whichever buying costs and to any income audience. There is a need to rethink such a model for making public subsidies available. They are currently not being addressed to the most vulnerable families and to the urgent need to face a housing crisis.

Therefore, there are significant challenges to its full effectiveness in providing housing in well-located and urban-structured areas. There is the challenge of facing the high value of land in well-located areas. And also challenges of effective policies to deal with the rundown built-units stock. The challenge of ensuring that displaced dwellers will remain in the areas where they used to live. The other challenge is establishing housing policies that restrain speculative processes and housing transfers to higher social strata.

Earmarking ZEIS has played a crucial role in preventing private ventures for higher-income households from taking up space in socially assigned areas. ZEIS has also enabled such development interventions to be taken to trial. Even though they do not guarantee dwellers to remain or habitability improvements, findings show that mitigating-oriented solutions have been offered. For example, the "*Bolsa Aluguel*" (Rent Assistance Program) and the Letter of Credit (in the case of families displaced from special zones of social interest).

The requirement for Management Councils to intervene in occupied areas is one of the factors that enables the mobilization of the actors involved and

the guarantee of the social function of the land. Such findings are confirmed by the State Public Ministry regarding ZEIS 3 cases taken to trial (GATTI, 2021). On the other hand, special zones of social interest have not been prioritized for social housing provision. Type 3 zones remain precariously occupied, under appalling living conditions, since there is no significant public regard therein. Besides, private housing provision has superseded urban incentives, equal or superior, in other city areas. An example is a FAR equal to 6 along the Urban Transformation Structuring Axes and the payment-free FAR within the Center Urban Operation. In addition, a favorable scenario is also created to deliver HIS 2 type units outside ZEIS, without charging developers from paying the additional building rights levy and letting them free to allocate a specific area for HIS1.

Therefore, earmarking ZEIS operates as a starting point for democratizing urban land. However, it does not guarantee improvements in housing quality and the right of permanence. Nor does it ensure that housing units will be reserved for the poorest. Therefore, earmarking ZEIS must be an activity linked to self-applicability regulations for accessing land. In addition, related to a participative management process that does not take collective interest for granted. Finally, earmarking ZEIS must foresee affordable alternative ways of acquiring housing[11].

The 2014 Master Plan had the opportunity to review the urban instruments that did not fully reach their goals as they were conceived[12], due to the way they were conceived or for not having been properly applied by the municipal administrations after the approval of the 2002 PDE. In the case of ZEIS, we could distinguish multiple aspects that featured some weaknesses in law-making. Among them are the inapplicability of its

11. In Brazil, 76.7% of the housing deficit is made up of families with income between 0 and 3 minimum wages, according to the National Household Sample Survey (PNAD 2012). In São Paulo, this percentage reaches 74.5%, according to CEM data from the 2010 Census.

12. See more in GATTI (2015) about the review process of the ZEIS in the new Master Plan of São Paulo.

fundamental social function principles and the need for constant corrections as urban transformations occur over time.

The year 2021 opens up a new instance for us to critique the last 5 years' master plan performance. From the considerations presented here, it was possible to list some points that deserve attention for a future review of the ZEIS in the city's legal framework and in the monitoring of the public policies that surround them. Knowing that not all the necessary changes are specific attributions of the law, but of the processes that affect it and the public policies applied.

Goals to be achieved to make ZEIS 3 effective as an instrument for accessing land and guaranteeing the permanence of the poorest:

1. Reserve percentage for families and individuals with income between 0 and 1 M.W. and between 1 and 2 M.W., within the percentage of HIS 1, for implementation of the Social Housing. Those are the targeted income groups that do not access bank housing financing and are currently not covered by existing housing programs.

2. Provide regulating FAR greater in ZEIS than in Axes, or at least equal, to not generate territorial market competition.

3. Demarcate ZEIS 3 along the Axes, considering that investment in infrastructure therein must also comprise the lowest incomes.

4. Extinguish free Onerous Grant payment fee within Center Urban Operation's perimeters (future urban intervention project Central Sector - in portuguese: PIU Central Sector), regardless of the targeted income groups. Avoid Downtown São Paulo to attract exclusively high-end businesses.

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5. Implement housing programs focused on ZEIS 3 areas that can improve the habitability of the existing housing offer, which are tenements, and enable new public social rental projects focused on the most vulnerable strata without being subject to real estate appreciation.

6. Guarantee a demand control system for HIS 1 and HIS 2 projects. Public subsidies are being employed by projects on a free-market trade. For this, it is necessary a reliable, computerized property registration.

7. Guarantee a demand control system for public-subsidized social housing trades.

8. Mandatory preparation of ZEIS Management Councils prioritizing public interventions, thus avoiding taking projects disconnected from the local reality to trial.

9. Regulate the Tripartite ZEIS Management Councils: civil society (residents: tenants, and owners), organized civil society, and public authorities so that the collective interest is prioritized and not the interest of certain groups.

10. Retake ZEIS definitions by sets of blocks to enable more comprehensive management councils and expanded urbanization plans.

Hence, an essential factor to recognize in any ZEIS's assessment is examining their dual function: their role as a land reserve for social housing and as security of the possession and guarantee of permanence.

Housing stock was analyzed quantitatively and comparatively to other ZEIS and other city areas. Still, findings may be interpreted from multiple points of view

since providing fewer residential units within ZEIS is not necessarily a negative factor. Hence, the mere aspect of existing ZEIS helps protect those who live there from the market's speculative processes and maintain the reserve of areas in the city's total stock.

However, our premise is that ZEIS 3 were earmarked above all on areas occupied by the low-income population living in precarious housing conditions. Public policies' non-action will perpetuate these unsafe conditions if they focus on local residents' service. However, public policies often dismiss policies that do not prioritize residents and cause their displacement. In such cases, a legal battle for housing assistance is on the agenda. Nevertheless, some achievements are possible, albeit partial, considering legal determinations. Therefore, findings are still inaccurate and need to be analyzed considering the actors involved, the active policies, the market dynamics, and the political forces that mobilize disputes over territory.

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The Solidarity Share as a Shortcut to Achieve Low-Cost Usage Coefficient

7

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Abstract

Solidarity Share is an urban planning tool created by the 2014 São Paulo Master Plan to promote inclusive housing. The share requires allocation of social housing in new developments according to specific rules. However, there are alternatives to the use which run against the share's primary objective. One of them is paying an amount far below the calculation practiced by the onerous grant charge in exchange for additional building potential above the limit defined by the maximum FAR in the city. Evaluating the instrument's implementation process has revealed that, in addition to not complying with the social-function objective, it expands the building projects at a low cost for developers. The study has shown that trade-offs expenses are not enough to provide affordable inclusive housing as well as are scarce to reduce socio-territorial inequalities in the axes of interest in urbanization.

Keywords

Solidarity Share, Inclusive Housing, Social Housing, Master Plan, São Paulo.

INTRODUCTION

This chapter presents Solidarity Share, an urban planning tool that is a novelty, a novelty land-use technique addressed by São Paulo's 2014 Master Plan. Initially, the chapter will present an analysis of the share in light of the 2014 Strategic Master Plan and respective regulations. Then, it is going to show which international inspirations have helped to shape Solidarity Share framework in Brazil. Following, the text will feature the process of drafting the bill submitted to the City Council. Finally, it will assess the potential application of the instrument considering their guidelines and immediate results set between 2014 to 2019.

Conclusions are built on the Solidarity Share's performance from 2014 to December 2019. They assess the impact of developers choosing the alternatives included in the legal text from the perspective of housing provision and prioritizing axes of urbanization and fund raising. After five years of validity, this text highlights the limits of this urban planning tool and possibilities for reversing the current framework built on territorial segregation through the promotion of inclusive, affordable housing.

THE INTRODUCTION OF THE SOLIDARITY SHARE IN SÃO PAULO

What is Solidarity Share?

Solidarity Share is an urban planning tool that promotes inclusive affordable housing in the city of São Paulo. It was created by the 2014 Strategic Master Plan under the bill N° 16,050/2014. This bill determines that every new development project with more than

20,000 square meters must allocate 10% of its built-up area to provide social housing within the same land parcel. As a counterpart, these 10% will not count for the total development rights. Theoretically, this action shoud promote mixed-use land and provides social housing at controlled prices. Developers can get 10% off additional development potential (air rights) over the built area in compliance with this requirement upon being charged for the Additional Building Rights Levy (OODC) payment fee.

Floor Area Ratio (FAR) is one of the most important indexes to calculate Solidarity Share. An additional 10% above the maximum FAR determined by law becomes an enthusiastic variable in order to promote affordable housing primarily in high-value locations. However, being obliged to build social housing within the project's land parcel challenges market interests. Therefore, after intense pressure from real estate market, the draft bill disclosed alternatives for developers to comply with the project's scope requirements.

The first alternative defines that the same percentage of the computable area can be transferred to another land parcel, as far as this area is located within the Urban Qualification and Structuring Macrozone (Portuguese: *Macrozona de Qualificação e Estruturação Urbana*).

The second alternative is donating another land parcel equivalent to 10% of the land parcel value supposed to be licensed. Finally, the third alternative is to deposit the equivalent of 10% of the land value into the Urban Development Fund (FUNDURB).

Another critical issue is the meaning of computable area. It is not equivalent to the built-up area. It encompasses a set of construction elements not

considered for FAR purposes and payment of concessions. Article 62 of Municipal Bill N°. 16,402/2016 (Zoning Law) defines the elements not counted as computable areas. In that same article, in paragraph 2, it is stated that "The sum of non-computable built areas (...) is limited to 59% of the value corresponding to the total built area of the building".

Factors	Aplication
To Whom It Concerns	Developments with a computable area greater than 20,000 square meters
Responsible	Developer
Destination Of Social Housing	Households earning up to 6 minimum-wages
Requirements	Allocate 10% of the computable area for social housing
Alternatives	1. Allocate 10% of the computable area to social housing on another land 2. Donation of land with an area equivalent to 10% of the original development land 3. Deposit of 10% of the original land value into the Urban Development Fund (FUNDURB)
Benefits /Incentives	The requirements can be fulfilled until the certificate of completion is issued. 10% off additional development potential

Table 7.1
Requirements for implementing the Solidarity Share in São Paulo
Source: Municipal Law N°. 16,050/2014. Created by Patricia Cezario and Igor Borges.

For this research, we used a proxy of 50% computable area and 50% non-computable. This contributes to the understanding of obtaining an additional 10% off above the maximum FAR determined by law. It is critical to highlight that the non-computable area is traded at the same value as the computable area.

When applying Solidarity Share to a real-estate development that already reached the maximum FAR, developers acquire an additional 10% FAR to meet the share's requirements. In other words, it is possible to exceed the limit established by law up to 10%. For example, suppose a project within the Urban Transformation Structuring Hub Zone could consume a FAR = 4,0. In a 10,000 sqm lot the built-up area (computable) can reach 40,000sqm (20,000 x 2). To meet Solidarity Share requirements, developers donate 10% of this computable area (= 4,000sqm for social housing). So, its built area is now 44,000sqm (40,000+4,000). Therefore, the FAR becomes = 4.4.

International inspiration

Solidarity Share aims to promote social mix on the scale of the development through offering units at affordable prices and at market prices. It is similar to housing programs such as Inclusionary housing that apply similar strategies around the Global North. Although each Inclusive Housing program adopts very particular rules, their objectives are mainly three:

1. Promotion of social diversity in housing projects;

2. Inclusion of the private sector as co-responsible for tackling socio-territorial inequalities;

3. Increase fundraising to provide housing and land by the government.

Schuetz et al. (2007) showed that the model applied in San Francisco, in the U.S., requires that every project with more than five housing units must allocate 15% of the built-up area to affordable social housing. The 15%

of units remain under rent control for about a 50-year period. Developers can also opt to pay a compensatory linkage equivalent to up to 25% of the project's value. The same happens within the Solidarity Share's framework in São Paulo.

Factors	Application
Framing	Real estate projects with more than 5 or 10 housing units
Responsibility	Developer
Inclusive housing share	10% to 15% of housing units must be sold or rented at affordable prices
To whom it benefits	Priority service to very-low, low, and low-middle income households
Rent control	Sale and rental price controls last between 45 and 55 years
Alternatives	Land donation or cash payment
Benefits	Increased FAR and tax exemptions

Table 7.2
Summary of the inclusive housing program in the San Francisco area
Source: Authors' elaboration from Schuetz et al. (2007).

In France, a crossed-scale policy at national, regional, and municipal levels promotes affordable housing. For example, municipalities must reach 20% of their housing stock in social housing units as a national guideline for tackling urban segregation. In addition, France seeks to include private developers and employers as leading agents to achieve this national objective through incentives and participation in planning.

Factors	Application
Framing	Municipalities with more than 3,500 inhabitants, or more than 1,500 inhabitants (within the Paris region)
Responsibility	Mayor
Inclusive housing share	25% of the housing stock in the municipality is towards social interest purposes.
To whom it benefits	Households with income between €11,167/year (1 person) and €95,079/year (6 people).
Rent control	Failure in complying with the rules implies paying a fine per unit in a deficit situation
Alternatives	Public and semi-public funds (i.e., Action Logement) provide financing and guarantees for purchasing units or paying a subsidy in social rent

Table 7.3
Summary of the application of inclusive housing in France
Source: Authors' elaboration from Schuetz et al. (2007).

Process of discussion and approval in City Council

Even though civil society and councilors have sent several proposals to help City Hall formulate São Paulo's Solidarity Share during the law's processing period, no simulation records or impacts modeling were found. In addition, recommendations varied as to the classification of projects, from universalizing the instrument to all development projects to proposals that limited its application to projects with an area greater than 20 thousand square meters.

Another element that diversified the proposals was the projects' share value for social housing, varying between 5% and 30% of the built-up area. In addition, one of the suggestions included a territorial differentiation label for classifying projects located in strategic areas for urban development. The table below presents a summary of the set of proposals submitted to the City Council.

Table 7.4
Summary of proposals for the Solidarity Share presented to the City Council of São Paulo
Source: Authors' elaboration from access to Information Law, Protocol 34,148, of Sep. 10, 2018.

Proposal	Author	Framework	Amount of additional-area to social housing
1	AsBEA	Universe	10%
2	CPUMMA	Developments with area greater than 20,000 square meters	10%
3	Natalini (PV)	Developments with area greater than 20,000 square meters	25%
4	Toninho Vespoli (PSOL), Gil Scatena, Housing Movement Union (UMM), and Union for the Right to the City in the Master Plan	Developments with an area greater than 10,000 square meters or 7,000 square meters (metropolitan structuring macro-area)	20% to households earning up to 3 M.W., or 30% in another land if located within the same macro-region

Instrument application potential

The universe in which the Solidarity Share could be applied is scarce. Based on real estate developments between 2000 and 2010 in São Paulo, only 159 projects had a built-up area exceeding 20 thousand square meters. These projects represent only 2.5% of all developments launched this period, corresponding to 14% of the entire built-up area in a ten-year period.

In order to discuss the likely result scenario if Solidarity Share were applied extensively, we simulated the number of social housing units that could've been produced from 2000-2010 and where they would be located.

Table 7.5
Real estate development launches in São Paulo from 2000 to 2010
Source: Embraesp/ CEM 2000-2010, ABRASCE 2000-2010. In: Silva (2015)..

	Real-estate development launches (unit)	Land area (m²)	Built-up area (m²)
Total developments launched	6,828	15,147,851	32,578,320
Developments with an area greater than 20,000 square meters	159	2,107,907	4,483,983
% of total	**2. 5%**	**14%**	**14%**

Table 7.6
Inclusive housing potential based on projects launched from 2000 to 2010
Source: Embraesp/ CEM 2000-2010, ABRASCE 2000-2010. In: Cezario Silva (2015).

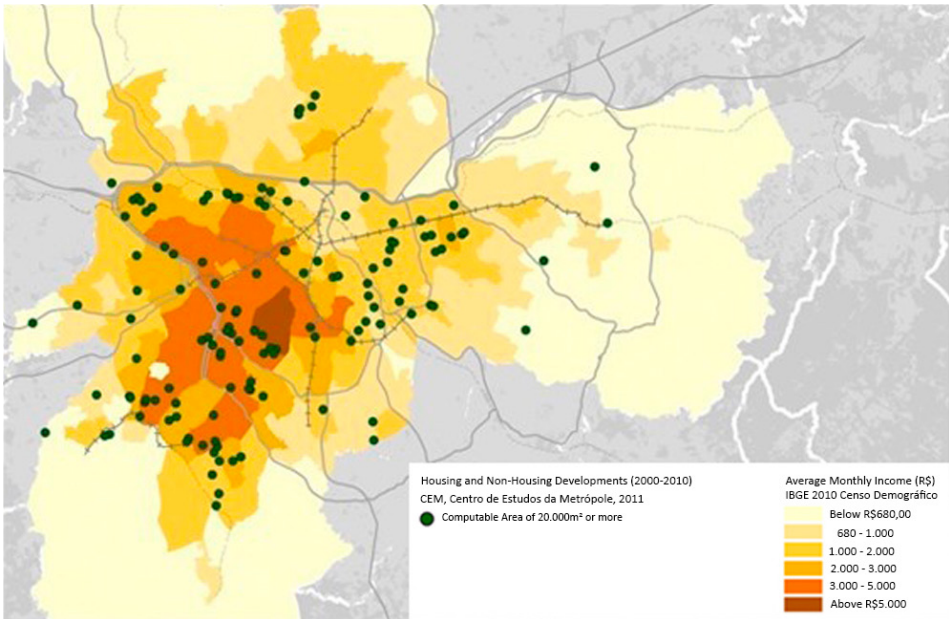
The total area of developments with an area greater than 20,000 square meters	4,483,983
10% of the built-up area aimed at social housing	448,398
The potential amount of social housing units	22,994
% considering housing deficit	4.92%
Standards I	39 square meters of the built-up area, accordingly with *Minha Casa, Minha Vida* Program

Different scenarios can be depicted depending on the choice of the real estate developer. Solidarity Share would potentially allocate approximately 450 thousand square meters of computable area for social housing in ten years, reaching close to 23 thousand units, considering the 50% proxy of computable area consumption.

These units would be located within the original development area or up to 30 kilometers from downtown São Paulo. Donating land based on the original land's value could lead to the offering of small lots in high-value locations. Or large lots in peripheral regions. Both are estimations difficult to scale. As for the developer's option to pay to the Urban Development Fund (FUNDURB), the revenues would reach approximately R$ 640 million (US$ 121 million).

The figure below shows the location of projects launched between 2000 and 2010 supposed to have a Solidarity Share applied. In addition, we point out where the social housing units could be located if developers chose to comply with the provision requirement of social housing.

Figure 7.1
Location of projects with potential Solidarity Share requirement launched from 2000 to 2010
Source: Embraesp/ CEM 2000-2010, ABRASCE 2000-2010. In: Silva (2015).



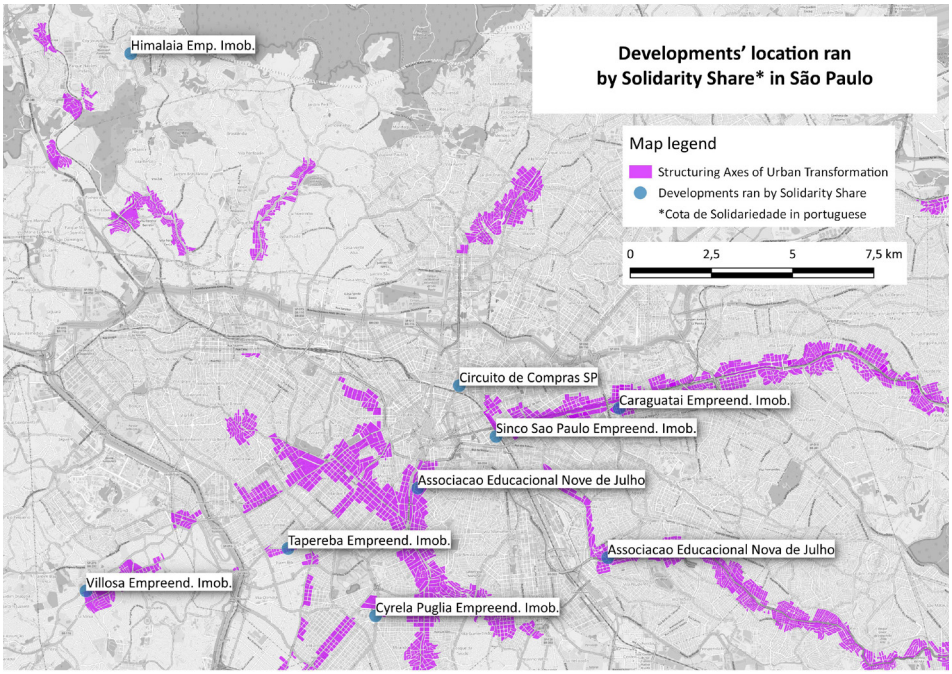
The instrument's effectiveness lies in its potential to promote a diversity of housing supply in the most desired locations. Thus, Solidarity Share could provide affordable housing in regions with more significant jobs, infrastructure, and services opportunities. Focusing on priority areas of interest for urbanization, such as the Urban Transformation Structuring Hub Zone, where rapid mass transit is available, would be essential.

SOLIDARITY SHARE'S PERFORMANCE: PARTIAL EVALUATION

From 2014 to December 2019, nine projects were run under the Solidarity Share. The developments can be divided into three profiles. The first profile is high-end developments located within Urban Transformation Structuring Zone (Portuguese: *Zona Eixo de Estruturação da Transformação Urbana*). They opted for an alternative requirement to contribute to the Urban Development Fund (FUNDURB). Thus, they obtained FAR higher than the maximum allowed by law as a counterpart. The second profile is composed of large non-residential developments, such as shopping malls and colleges, which decided to go for the same alternative on contributing to FUNDURB. Finally, the third profile comprises social housing developments, which had to comply with the requirement defined by law by allocating part of its units to social housing. Yet, they could not promote social mixing. Therefore, as far as we can tell, such an instrument did not meet its proposed goal.

Between 2014 and 2019, Solidarity Share raised about 1.5% of the total collected by FUNDURB in the same period. The amount fundraised by FUNDURB also comes from charging Additional Building Rights Levy (OODC). The total collected by applying the Solidarity Share was R$ 29,294,596.07 (or US$ 5,59 million), and the total collected by FUNDURB was R$ 2,020,208,925.64. 2.020.208.925 (US$ 328,9 million).

Figure 7.2 **Developments' location ran by Solidarity Share** Source: Authors' elaboration from access to Information Law, Protocol 34,148, of Sep. 10, 2018.



Seven out of nine developments are in the Urban Transformation Structuring Hub Zone, with more significant urban facilities (FAR = 4.0). However, six out of the same nine developments exceeded the maximum acceptable-zoning FAR. The only company that has not surpassed this coefficient is a college.

It is worth comparing the amounts paid as OODC charges and FUNDURB deposits in projects that did not meet the share's requirement. OODCs charges are mandatory for any development greater than FAR = 1.0. In addition, such FAR increase consequently represents a larger tradeable area.

Table 7.7 **Developments ran by Solidarity Share** Source: Authors' elaboration from access to Information Law, Protocol 34,148, of Sep. 10, 2018.

	COMPANY	Computable area (m²)	Land area (m²)	FUNDURB collection (R$)
1	CIRCUITO DE COMPRAS SAO PAULO SPE SA	182.301,46	66.836,50	12.431.561,00
2	CARAGUATAÍ EMPREENDIMENTO IMOBILIÁRIO SPE LTDA.	28.142,38	6.396,00	1.970.607,60
3	CYRELA PUGLIA EMPREENDIMENTOS IMOBILIARIOS LTDA.	31.064,86	7.060,23	2.166.078,57
4	ASSOCIACAO EDUCACIONAL NOVE DE JULHO	26.641,48	9.845,00	1.453.665,40
5	VILLOSA EMPREENDIMENTOS IMOBILIÀRIOS LTDA.	24.799,54	5.665,26	896.244,14
6	SINCO SÃO PAULO EMPREENDIMENTOS.	30.657,69	6.378,10	-
7	TAPEREBA EMPREENDIMENTOS IMOBILIÁRIOS LTDA.	22.956,78	4.879,20	3.675.501,36
8	ASSOCIAÇÃO EDUCACIONAL NOVE DE JULHO	106.627,37	16.669,00	6.700.938,00
9	HIMALAIA EMPREENDIMENTOS IMOBILIÁRIOS LTDA.	18.202,24	9.529,00	-
	TOTAL	**471.393,80**	**133.258,29**	**29.294.596,07**

However, the amount paid to FUNDURB is considerably lower than that one spent as OODC charges for the same area. This can represent an acquisition of air rights (above the maximum) at a low cost. When analyzing the results of Solidarity Share's fund raising, it can be verified, once again, that it does not meet its expected objective. The fundraising balance is visibly insufficient to promote social housing in a proportion and location similar to that of projects ran under the Solidarity Share application.

Table 7.8 **Developments' real FAR ran by Solidarity Share** Source: Authors' elaboration from access to Information Law, Protocol 34,148, of Sep. 10, 2018.

	DEVELOPER	MAXIMUM FAR	REAL FAR	OODC COLLECTION (R$)
1	CIRCUITO DE COMPRAS SAO PAULO SPE SA	2,00	2,73	279.194.273,28
2	CARAGUATAÍ EMPREENDIMENTO IMOBILIÁRIO SPE LTDA.	4,00	4,40	25.336.272,41
3	CYRELA PUGLIA EMPREENDIMENTOS IMOBILIARIOS LTDA.	4,00	4,40	51.552.343,39
4	ASSOCIACAO EDUCACIONAL NOVE DE JULHO	4,00	2,71	5.085.134,32
5	VILLOSA EMPREENDIMENTOS IMOBILIÀRIOS LTDA.	4,00	4,38	9.081.129,29
6	SINCO SÃO PAULO EMPREENDIMENTOS.	4,00	4,81	-
7	TAPEREBA EMPREENDIMENTOS IMOBILIÁRIOS LTDA.	4,00	4,71	76.697.748,67
8	ASSOCIAÇÃO EDUCACIONAL NOVE DE JULHO	4,00	6,40	329.085.709,13
9	HIMALAIA EMPREENDIMENTOS IMOBILIÁRIOS LTDA.	2,00	1,91	-
			TOTAL	**776.032.610,49**

Taking the number of low-cost housing units intended for the low-income market as a reference, we again verify that the instrument does not reach its proposed objective. Only two out of the nine developments allocated 159 social housing units. As already learned, the other enterprises opted for an alternative in depositing money in FUNDURB to compensate for not meeting the primary requirement.

To analyze the efficiency of alternative payment to FUNDURB, we simulated the number of housing units that could've been produced in each development in case the main requirement of this urban planning tool had been met. In addition, we have also estimated the number of housing units that could've been afforded concerning the amounts paid to FUNDURB for each development. Finally, we considered the costs of land acquisition and works expenditures concerning a basic housing unit. The following table summarizes our simulation-optimization scenario.

Table 7.9
Simulation of housing units that could've been delivered in projects run by Solidarity Share
Source: Authors' elaboration from access to Information Law, Protocol 34,148, of Sep. 10, 2018.

Project	Option	FUNDURB collection	Social Housing Units	Social Housing provided by FUNDURB collection	Social Housing benefited from Solidarity Share
1	FUNDURB	12.431.561,00	-	96	935
2	FUNDURB	1.970.607,60	-	15	144
3	FUNDURB	2.166.078,57	-	17	159
4	FUNDURB	1.453.665,40	-	11	137
5	FUNDURB	896.244,14	-	7	127
6	Social Housing	-	116	-	116
7	FUNDURB	3.675.501,36	-	28	118
8	FUNDURB	6.700.938,00	-	52	547
9	Social Housing	-	43	-	43
	TOTAL	**29.294.596,07**	**159**	**226**	**2.326**

As shown, a comparison between findings makes evident its inefficiency. Thus, in addition to not fulfilling its primary objective, it has also been unable to raise compensatory revenue.

Let's consider an universe on allocating 10% of the computable area for a 39-sq mt sized social housing unit. They would consume approximately 50% of the computable area within the project's land. Thus, about 2,326 housing units could've been delivered.

On the other hand, if we analyze the share of FUNDURB's raise for Solidarity Share (at a housing production cost of R$ 129,700.00 per unit or US$ 686.113), funds raised would be enough to build 226 units. This value is equivalent to less than 10% of the housing potential. Also, considering the pattern of public housing production in São Paulo over time, these 226 units would probably be located on the city's outskirts.

If complying with Solidarity Share's requirements is the best option to meet a public interest, why does the prospect of depositing in FUNDURB not represent a compensation or equalization of results? And how meaningful is the benefit that led all developers to opt for a deposit alternative?

In order to verify the ability to pay adequate compensation for non-compliance, we have carried out a profit simulation in each development that might've opted for depositing in FUNDURB. we have based our calculations on data provided in the approval permits. The experiment sought to analyze i) how much the project would have paid and ii) the revenue potential from selling additional areas. For example, our simulation results for CYRELA PUGLIA EMPREENDIMENTOS IMOBILIÁRIOS LTDA project are come next:

	Onerous Grant (OOCD) (R$) [1]	Deposit in FUNDURB (R$) [2]	Total payment (R$)	Estimated market value profit (R$) [3]	Estimated profit value of social housing (R$) [4]	Total gain in the additional area (R$)
1. Deposit in FUNDURB	6.671.489,33	2.166.078,57	8.837.567,90	18.339.015,84	-	9.501.447,94
2. 10% to social housing within the project	6.671.489,33	-	6.671.489,33	18.339.015,84	6.880.984,62	18.548.511,13

[1] Over an additional 10% area
[2] Over an additional 10% area
[3] Sale of 6,212 m² (of which 3,106m2 is computable) at a value of R$ 16,398.50/m2 and profit of 18%.
[4] Sale of 6,212 m² (of which 3,106m2 is computable) at a value of R$ 6,153.85/m2 and profit of 18%.

Table 7.10
Simulation of profit capacity in complying with requirements or choosing an alternative to Solidarity Share
Source: Authors' elaboration from access to Information Law, Protocol 34,148, of Sep. 10, 2018.

In the case analyzed, developers will pay around R$ 8.8 million to build more than 20,000 square meters of the computable area without complying with the social interest housing requirement. The additional area of 3,106 square meters of computable space represents roughly 50% of the total built-up area, reaching 6,212 square meters of traded area. Therefore, this operation would lead to additional revenue of over R$ 101 million. Still, considering that the average profit is 18%, the final balance would be around R$ 9.5 million.

If developers had chosen to allocate 10% of the project's built-up area to social housing, this area would not be considered computable, discharging them from paying an Onerous Grant fee. On the other hand, upon paying an Onerous Grant fee, the project could also have an additional computable area of 10%, reaching a FAR = 4.8, while the maximum FAR = 4.0. Thus, on the one hand, developers would earn extra 6,212 square meters to sell them at market values, in addition to selling social housing units, making R$ 18 million in profits (only over an additional 10% area).

FINAL CONSIDERATIONS

Assessing Solidarity Share's performance in São Paulo from 2014 to 2019 indicates it has not been meeting its proposed objective. Besides, it has benefited developers on the acquisition of maximum air rights potential at a low cost. Alternatives to complying were insufficient to compensate for the non-compliance loss. Moreover, the instrument is neither efficient in providing inclusive affordable and well-located housing nor tax collection revenues.

So, its application has not been beneficial to the city of São Paulo, we conclude. To keep it going, it should be conditioned to reviewing some share's guidelines, such as the following ones:

- Complexify the classification of projects.
- Maximize rent control on social housing units.
- Provide feasible management arrangements.
- Prioritize projects within Urban Transformation Structuring Hub Zone.
- Re-dimension compensation values when projects do not meet assigned requirements.

Compensation revenues should be sufficient for providing low-cost units to the same extent and location. Again, following the way it'd be intended if built in the same project where the share is applied.

Eventually, it would be essential to review the framing factors, shares differentiation, compensation alternatives, and benefits.

Factors	Application of Socio-territorial Compensation
Framing	Enterprises located in the Structuring Axes of Urban Transformation
Accountable	Developer
Inclusive housing share	50% of the computable area should be allocated low-cost housing units, being 30% up to the limit price for HMP and 20% up to the limit price for social housing (type 2)
Destination	Households with incomes of up to 10 M.W.
Compliance alternatives	Payment of Socioterritorial Compensation Fee, equivalent to the additional onerous grant on the area that is not intended to build
Benefit for the entrepreneur	Discount on the onerous grant by the social factor (Fs) 0.6

Table 7.11
Proposal for reviewing São Paulo's Solidarity Share
Source: Author's elaboration.

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afterword

Considering the 2002 and 2014 Strategic Master Plans of São Paulo, this book sought to highlight the limits and possibilities for planning tools to achieve their primary premises: promote the Social Function of the City and Urban Property; guarantee Equity and Socio-territorial Inclusion; encourage Democratic Management and the Right to the City— understood as the right to access urban infrastructure, housing, environmental and cultural heritage.

From the overall analysis, these goals appear to be far from being achieved, unfortunately. Therefore, this final section will summarize this book's main findings on articulating urban policy and tools application.

First, findings show that Consortium Urban Operations were financially successful in areas where developers were most interested. Yet, we can not stop problematizing what kind of quality such "successfulness" is. Taking the main objectives of the Master Plan into consideration is the adequate assessment criteria to find responses.

When comparing the funds collected in Urban Operation- Consortiuns and Additional Building Rights Levyframeworks, the first raised approximately 2.5 times more than the latter for equivalent additional areas. In addition, as funds collected in the Consortium Urban Operation had to be spent within the intervention area, upgrading investments massively remained in the city's wealthiest regions. The inequality situation shows that

City Hall has 70 times more resources to spend for each square meter within an urban operation area than for each square meter in the rest of the city.

Even though fund investments remained traditionally in the wealthiest areas, they were supposed to grant more social benefits. Yet, it did not happen: 45% of the funds were spent on road works to attend to the elite's motorized interests. On the other hand, only 24% of the funds went for social housing and public transport works. So, as far as we can see, a not very significant social return was given back.

This also explains how the urban tools generated extreme fiscal regressiveness by benefiting developers over the city. They did nothing but reinforce the traditional practice of concentrating public investments in the city's wealthiest areas. In addition, they exacerbated socio-environmental disparities towards an opposite direction of Strategic Master Plan goals foresaw.

Besides, it is still challenging to measure the effectiveness of the master plan's guidelines. For example, despite addressing that at least 25% of the funds should have been spent on acquiring land for social housing, the last CEPAC auctions (Certificates of Additional Building RIghts) had low interest from developers. Especially when compared to other areas where developers preferred paying off Additional Building Rights Levy to get the right to develop in more profitable areas. Thus, such an urban operation model is not as helpful as it was supposed to be.

On the other hand, data show that the Additional Building Rights Levy (OODC) has gained ground in São Paulo's urban policy to raise funds for implementing urban works. The financial collection grew sharply in

the late 2000s, maintaining a constant growing pattern for most of the 2010s. In 2019, it reached an exponential record increase. However, like urban operations' experience, the most funds came from and remained within the highest valued regions.

The Urban Development Fund holds a potential role in redistributing wealth generated by the funds collected through the OODC as funds are allowed to be spent on urban works regardless of locational matters. On the other hand, there is still no clear Qualitative and Quantitative evidence to assess whether the discounts granted by the OODC calculation formula induced urban development as addressed by the master plan or wetherthey might act exclusively to reduce costs of developers in the city's most expensive areas.

The study of the Urban Development Fund - FUNDURB application is dubious about its redistributive role and effect. It was challenging to analyze its performance given the lack of information in its initial stage. Furthermore, we saw that the Fund Management Board held meager participation in decision-making. The municipal departments officials practically led decision-making to the detriment of citizens' participation. This scenario addresses questions to what extent the works carried out therein were really of interest to the community.

The modifications addressed by the 2014 Plan could manage the FUNDURB resources wisely, redistributing it accordingly with the plan's objectives. And, thus, induce greater transparency in decision-making. The impact of FUNDURB might effectively meet the Master Plan goals if, as stated in the plan, at least 30% be used for social housing (preferably within ZEIS 3) and the other 30% to provide public transport works, cycling lanes, and pedestrian facilities.

City Hall signaled its willingness to promote more transparent and democratic management when it established in the FUNDURB Management Council parity between municipal power representatives and civil society representatives, which were associated with other urban policy councils: Municipal Urban Policy Council, Municipal Housing Council, Municipal Traffic and Transport Council, and Municipal Environment and Sustainable Development Council.

Such changes made the Urban Development Fund meet the 2014' Master Plan goals, mainly under mayor Fernando Haddad's office (2013-2016). Most investments (50%) went for public transport, bicycle paths, pedestrian improvements, land expropriation, and acquiring old buildings to transform them into affordable social housing.

However, the political position of the following administration, João Dória/Bruno Covas (2014-2020), ended up changing the fund's budget lines far from its previous redistributive role. Soon, resources for providing bus terminal facilities in the city's outskirts were redirected to resurface asphalt driveways in the city's wealthiest regions, for example. Recently, the R$ 100 million (about US$ 20 million) renovation project for Vale do Anhangabaú in São Paulo Central Area became controversial. Despite being a public space, City Hall envisioned privatizing Vale do Anhangabaú for sporadically private events.

Regarding urban planning tools such as the Transfer of Development Potential (Air Rights) and its similar, the Transfer of Development Rights (TDRs), we pointed out

their low effectiveness in preserving the city's historic buildings. Besides, most owners who managed to sell their development rights had to wait for at least five years to receive their grants—an unrealistic time frame for a tax incentive intended to finance restoration works.

Even though the 2014 Master Plan assigned more agreeable achievements than the previous ones, the demand for buying development rights was lower than supply. In this regard, developers will undoubtedly always judge the most profitable transaction between TDRs or Additional Building Rights Levy (OODC) regardless of their social return.

In general, such a mechanism must be articulated with another form of benefit, as the development potential transaction is somewhat limited. Thus, it will not be possible to maintain the state of conservation of a protected property only with the money collected from the transfer. Therefore, to safeguard the built cultural heritage, it is crucial to place it into a broader, task-force plan. It is not wise to leave it to the planning instrument's account alone.

The application of the Solidarity Share indicated that it did not meet the expected objective. However, it served the interests of real estate developers, hidden from the norm, favoring the acquisition of maximum air rights at a low cost. On the other hand, the legal alternative of depositing amounts into the Urban Development Fund rather than providing social housing within the land project itself was insufficient to offset the loss of non-compliance with the Solidarity Share. Thus, the instrument was not efficient in delivering affordable and well-located housing, nor was it profitable for the city's tax collection.

The experience of Special Social Interest Zones also demonstrated the instrument's ineffectiveness in meeting the master plan's goals—considering the two zoning types we studied (ZEIS 1 and ZEIS 3).

In the case of ZEIS 1, the significant increase of restricted areas by the 2014 plan did not fulfill its expected goals to urbanize and regularize informal, impoverished settlements. Seventy-four projects were licensed between 2014 and 2018. More than seven thousand housing units within ZEIS 1, 61 of them private initiative led. These projects are not related to urbanization and regularization actions. Then, the manner social housing apartments were provided does not correspond to the specific objectives foresaw within ZEIS 1 framework. Besides, several areas demarcated as ZEIS 1 did not consider the boundaries of the real estate registry or land ownership, including numerous empty lots, which should have been demarcated as ZEIS 2 accordingly with the law.

In the case of ZEIS 3, the resources applied from the Urban Development Fund were much lower than expected by the strategies foreseen in the master plan. Housing provision, both public and private, was also negligible. On the other hand, the Compulsory Subdivision, Building or Use (PEUC) notification did not strongly impact these perimeters. Such areas concentrate many hovels and precarious occupations and require additional housing policies to upgrade them.

Rundown central areas remain with few chances for urban transformation and reverse existing housing precariousness. Because housing financing is the only way to acquire social housing, the poorest households

will hardly have the opportunity to move into them. Besides, the apartments are risky enough to be traded on a free, self-regulated market and passed on quickly to higher-income households.

Another critical point is the excessive number of type 2 social housing units (911) built by private developers outside ZEIS under public benefits such as exemption from paying an Onerous Grant. It is uncommitted to meeting the existing housing vulnerability or the 'queue' of families who have been waiting for decades for accessing public housing.

There are fundamental challenges to ensure its effectiveness for ensuring social-interest housing in well-located areas. Mainly challenges are regarding the high value buying land. For example, an absence of effective policies to deal with rundown-built structures; the guarantee of dwellers to stay in areas ruled as ZEIS; the establishment of housing policies that curb speculative market-led processes; the transfer of housing to other social strata.

Delimitating ZEIS has played a crucial role in preventing private ventures for higher-income households from taking up space in socially assigned areas. ZEIS has also enabled such development interventions to be taken to trial. Even though they do not guarantee dwellers to remain or habitability improvements, the results have offered palliatives such as the "*Bolsa Aluguel*" (Rent Assistance Program) and the Letter of Credit (in the case of families displaced from special zones of social interest). The requirement for Management Councils to intervene in occupied areas is one of the factors that enables the mobilization of the actors involved and the guarantee of the social function of the land.

As a general conclusion of the studies carried out so far, the primary beneficiaries of instruments addressed by the 2002 and 2014 plans have been the real estate developers. This is because they selectively take advantage of the "gaps" to maximize their profits regardless of the master plan's goals. In addition, several tools compete with each other[1], reinforcing private's profits over the public.

Regarding developers' performance, since the promulgation of the 2014 plan, development projects concentrated along with Urban Transformation Structuring Zones, however only in those located in areas of historical interest in the real estate market. Thus, it is essential to emphasize that, despite the public losses, the 2014 Plan has been partially effective in promoting densification along public transport axes, following its guidelines.

Regarding the competition between instruments and incentives, we believe that this diversity of tools and funds ends up being harmful to a more effective urban policy. For example, suppose we had all resources for works concentrated in a single fund (i.e., the Urban Development Fund). In that case, we could've been able to mitigate competition and deliver significant, more remarkable changes.

It proves the lack of a roadmap for the city's Urban Development Policy to follow. Moreover, the current policy fails when articulating the various parties' diverse interests. Thus, efficient public transport infrastructure, protection of city-built cultural heritage, or affordable social housing in well-located neighborhoods are left to the fringes of efficiency.

1. Such as, for example, Certificates of Additional Construction Potential (Air Rights), Onerous Grants, Transfer of Rights Developments, Solidarity Share, or exemption from paying an Onerous Grants to those committed to deliver social housing without due public control.

Various restructurings the São Paulo's central planning body has undergone have not contributed to placing it into a more active, leading position. For example, when it emerged in the 1970s, the body was responsible for preparing the city's multi-year investment budget. But such responsibility was taken from it in the 1990s.

In 2009, São Paulo's central planning body became known as the Municipal Secretariat for Urban Development (SMDU), with the following attributions: developing and improving urban planning and development legislation (master plan, regional plans, and zoning law), coordinating urban projects together with other municipal bodies; formulate urban development policies, guidelines, and actions; develop mechanisms for assessing the feasibility of urban projects, **exploring potential public-private partnership**; organize the municipal information system (SÃO PAULO, 2009).

In our view, exploring private-public partnerships distorts the agency's initial urban planning based on the premise that the whole must supersede any partial interest. Currently, the public interest ends up running circles around the private interest. Thus, secretariats spend lots of time and effort to make the consortiated urban projects feasible. Yet, to the detriment of a more proactive position to address sector plans based on Urban Development Fund's priorities.

We do not doubt the secretariats' capability in elaborating their sectoral plans here. Recently, the Municipal Housing Secretariat presented the Municipal Housing Plan, which contained a very adequate definition of this municipal policy, the forms, and resources necessary for its implementation. However, unfortunately, this plan is stalled at the City Council.

However, suppose the SMDU was to lead a movement to elaborate sectoral plans in the various secretariats. In that case, these could be embodied as the main objective of the Urban Development Policy and its financial resources, helping SMDU define priorities for Urban Development Fund's investments.

Another issue is the absence of sectoral urban policies themselves. This was quite evident in the cases studied here: the protection of the city-built cultural heritage and the provision of social housing. In both cases, urban planning tools to achieve their objectives are disconnected from a more comprehensive urban policy. As a result, there's been slight effectiveness in applying such tools.

So, our conclusions point out that the application of isolated land-use instruments produces innocuous results.

Finally, another major problem that is very characteristic of the reality of São Paulo and Brazil is the ephemeral nature of public policies due to political discontinuity. Thus, significant transformations foreseen by the 2014 plan ended up not coming into effect.

As we mentioned earlier, the office's political priorities that took on after Fernando Haddad's (João Dória/Bruno Covas) were practically the opposite on several issues. For example, regarding mobility policies, public-private partnerships and, more specifically, with real estate developers. Not to mention the behavior on planning and control of land use and occupation.

In this aspect, reinforcing social participation in the various councils related to urban policies and their decision-making character seems essential to ensure more excellent continuity of urban policies and make them survive the crossing changes of forthcoming political administrations.

Indeed, many issues were not addressed by this work thus should be the object of others. However, we believe we have contributed to evaluating the application of urban planning tools in São Paulo and defined essential points for their reformulation to more effectively promote the Social Function of the City and Urban Property; Equity and Socio-territorial Inclusion; Democratic Management; and the Right to the city.

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