

Land Based Financing for Urban Development - Implementation examples

An international compilation of Land Value Capture cases for urban practitioners

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Registered offices

Bonn and Eschborn, Germany

Address

Friedrich-Ebert-Allee 32 + 36

53113 Bonn, Germany

T +49 228 44 60-0

F +49 228 44 60-17 66

E info@giz.de

Dag-Hammarskjöld-Weg 1-5

65760 Eschborn, Germany

T +49 61 96 79-0

F +49 61 96 79-11 15

I www.giz.de/en

Sector Programme Cities

Responsible:

Alix Loisier Dufour, Andrea Renger, Barbara Scholz

Authors:

Erwin Van der Krabben and Nicolás Del Canto

Interviewees:

María Cristina Rojas, Camila Maleronka, Fernanda Furtado, Magda Cristina Montaña Murillo and Magdalena Vicuña

Acknowledgment for expert inputs:

Anastasiya Shadkhina, Zoé Gryspeert, Pia Rafalski, David Stoffel

Illustrations:

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Introduction

Many cities and agglomerations experience a shortage in land and public spaces which is adequately serviced, needed for the construction of public buildings, the enlargement of urban agriculture, and nature restoration. Land, however, is a key resource for the growth of urban systems. Therefore, skyrocketing urban growth rates generate an explosion of various needs: The quality of services is a key issue for local authorities meeting the expectations of urban users (inhabitants, workers, companies). The increase of needs for land is paired with the request for a higher level of services in terms of quantities (e.g. as a result of densification) and qualities (e.g. continuous provision). As backlogs are mostly the norm, a growth of population combined without an adapted response from the government increases the pressure on existing networks and systems. The lack of capacities and resources worsens the cities' state, and new problems may arise.

Thus, demographic growth increases the pressure on governments for the access of land, public infrastructure and services, generating conflicts. Furthermore, settlement areas generally tend to expand informally into the surrounding countryside. This mostly increases investments and generates costs e.g. for maintenance that weren't planned. This may also lead to a reset of development strategies or even to implementation failures, last but not least because of the reallocation of budgets and funds. Establishing well-managed and sustainable urbanisation processes is therefore a challenge for local authorities. In many cases, instruments, procedures and resources are disproportionate to the scope of the transformation processes which normally are quite complex and rapid. In a context of tight budgets and limited revenue opportunities (i.e. bounded transfers from other spheres of government, low revenue collection rates), the cities' capacities for investments are limited. Often, priority is given to construction investments and maintenance expenses are neglected, which creates problems on a short- to long-term basis inducing "fire-extinguishing" actions. To escape from these vicious circles, innovative methods of implementing proposed solutions for urban development are needed, based on a virtuous and sustainable financing.

Simultaneously, land value increases. This occurs as a result of the actions of the public sector. One of the reasons are public investments in infrastructure (providing e.g. electricity, water, sewerage systems, waste management). Other reasons are public works (e.g. roads, bridges, street lights, public spaces) or investments in public transport systems. And it is caused by investments in public services (health, education, culture, public spaces). The

granting of planning permission and building rights is lever to increase property values. However, although these value increases are achieved without any particular work or capital investment from the land owners, private stakeholders disproportionately benefit of these economic effects. Making sure that the returns of the public participation in generating such value increases accrue to the public sector would therefore allow local authorities to find potentially a significant source of tax revenues.

Complex interactions arising from the use of LVC instruments shall be carefully considered, as subsequent challenges may strongly balance the benefits of the approach. With regards to municipal revenues and the financing of urban infrastructures' investment/management costs, positive effects on the development of land prices are desired as this allows the capture of the benefits. However, the displacement of low-income residents is to be avoided: it must be ensured that affordable housing is still available despite the land value increase, e.g. by adapting building regulations or property taxes. Furthermore, the state of the local land market shall be considered, i.e. the ownership structure (e.g. oligopolistic ownership, fragmented ownership), building land supply and demand, investment structure (e.g. local building owners or real estate funds) and price fluctuations. Thus, ensuring an equitable reinvestment of revenue is a challenge as well. The effective use of LVC therefore requires the consideration of coordinated land-use planning, project development and tax policy altogether.

In the support to its partner organisations, the German DC is committed on topics where urban planning, project development and local financing intersect. LVC can improve access to a key high-hanging fruit: providing (infrastructure) finance, investment and planning decisions that are consistent with sustainable development challenges, in particular in countries of the Global South. It offers numerous opportunities and may be adapted to various contexts and situations. When used in conjunction with good governance and urban planning principles, it can be an integral tool to support governments advance positive fiscal, social, and environmental outcomes. In the development context, where many countries have insufficient regulatory and management capacities, LVC may also contribute to the implementation of the Agenda 2030 and especially the objective of sustainable urban development anchored in Sustainable Development Goal (SDG) 11 "Make cities and human settlements inclusive, safe, resilient and sustainable".

While many previous studies have remained on a theoretical level (what LVC strategies are available and how do they work) or have presented single case studies, looking at various characteristics, the present report presents an illustrative international compilation of 16 LVC implementation examples. For the case studies existing recent sources were used; in some case studies key informants for additional information were approached. Moreover, a standardized form was developed to describe the cases.

The target audience includes stakeholders involved in planning processes (including national and subnational governments, city networks, members of the scientific community, and private stakeholders) especially from countries where the understanding of LVC instruments is low, but also from countries where there is still quite some resistance to use those instruments. Depending on the target group, the required level of expertise in the field of sustainable urban development may vary.



Criteria used to select a representative panel of cases

To select a representative panel of cases the following criteria were used:

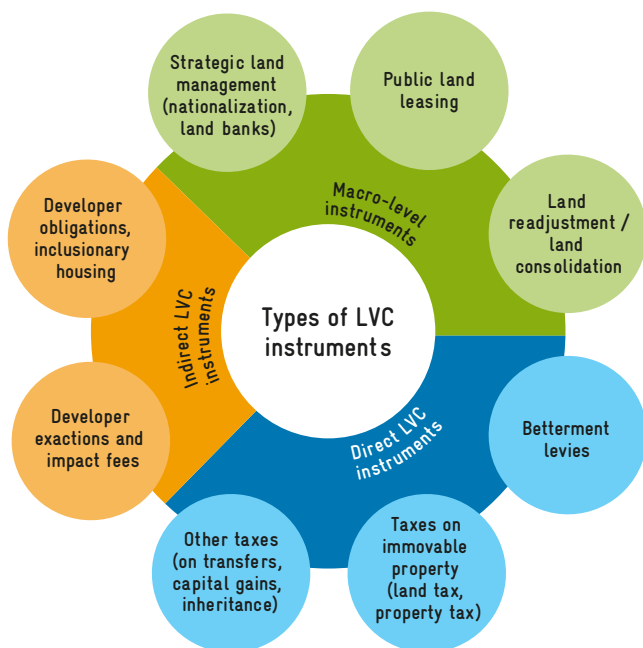
Step 1: Geographical scope, transferability, technical considerations

All cases meet with the following criteria:

- As a geographical scope the focus is on the Global South. Therefore, the majority of cases were selected from countries in Latin America, Africa and Asia. In order to cover a broad variety of LVC policies in practice, there are nevertheless additional cases from Global North countries.
- Cases, that are so country-specific that the possibility of international transferability of the LVC instrument to other countries would be unlikely, were excluded.
- All cases meet with 'technical criteria', particularly: 1) reliable information are available; 2) the cases contain 'learning potential' for other countries.

Step 2: Type of instrument

- The panel of cases covers a good variety of LVC instruments that are used internationally (overview taken from IHS, 2021). In line with the common way of distinguishing different types of LVC instruments, selected cases can be assigned to three categories: macro-level instruments, direct LVC instruments, indirect LVC instruments.



Selected instruments of LVC. Adapted from OECD/LILP (2020) and Alterman (2012).

Step 3: Features for a good example

The panel of cases includes particularly good performance on one or more of the following features:

- LVC cases that are relevant to a variety of types of land tenure (i.e. customary land tenure, private ownership, tenancy, and state ownership)
- Both good and bad practices related to aspects of the institutional context (i.e. legal framework, institutional capacity, transparency, stakeholder engagement and public participation).
- A variety of goals for which the captured land value is used. Contributions to:
 - Securing plots and land tenure for social equity, human well-being or agricultural, environmental and climate protection and adaptation purposes (e.g. affordable housing, upgrading of underserved neighbourhoods, ecological compensation functions, green/blue infrastructures, recreational areas)
 - Financing urban infrastructure and ensuring the provision of basic services;
 - Increasing urban resilience, implementing nature-based solutions.
- Both good and bad practices in terms of the amount of value captured from the total uplift in land value (relative to the windfall profit for the landowners) that is the result of spatial planning interventions (i.e. rezoning; investments in public infrastructure)

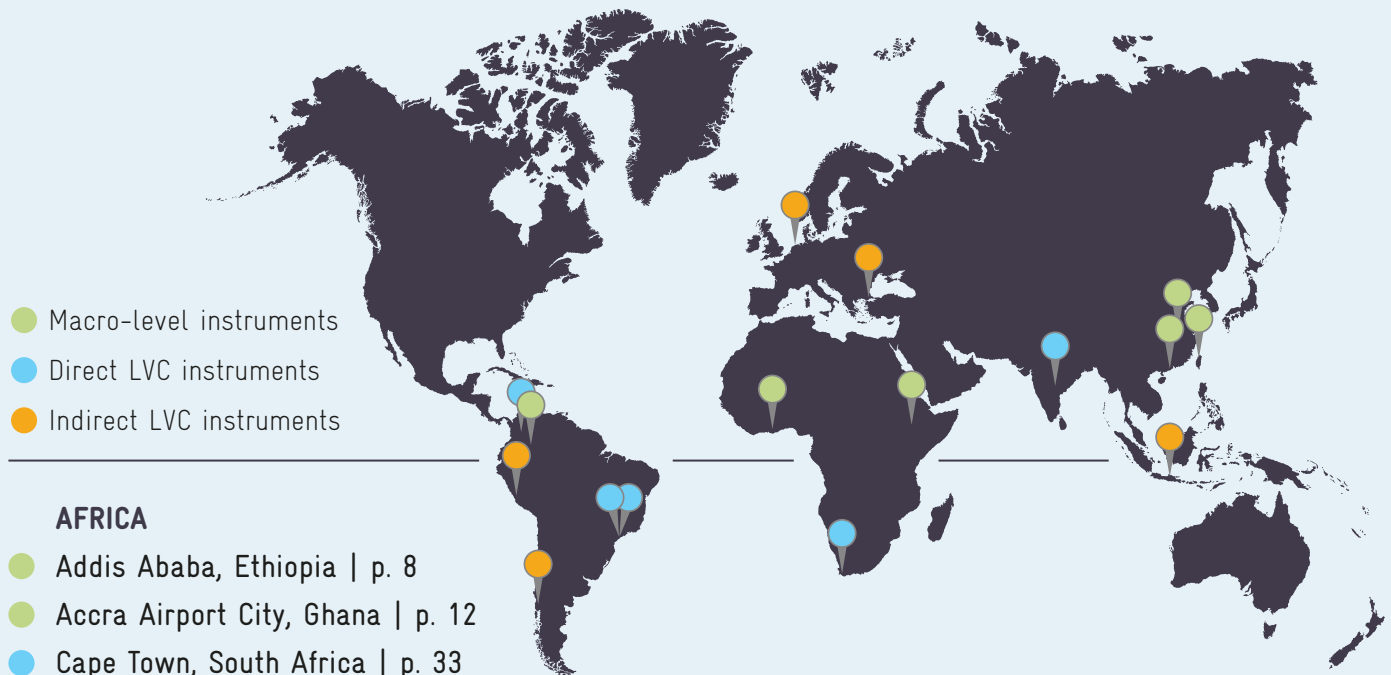


Sources / further reading

Alterman, R. (2012). Land use regulations and property values: The 'Windfalls Capture' idea revisited. Chapter in: 'The Oxford Handbook of Urban Economics and Planning' (Nancy Brooks, Kieran Donaghy, and Gerrit-Jan Knaap, eds.) pp, 755-786.

OECD and LILP. (2020). Building a Global Compendium on Land Value Capture. OECD: Project Flyer. Available online at: <https://www.oecd.org/regional/cities/Land-Value-Capture.html>

Presentation of the cases



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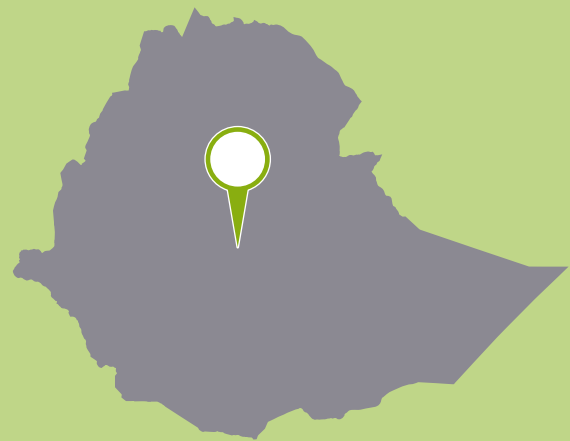
The cases are presented in a standardized form, enabling to compare the features of the LVC instruments and their impact on sustainable urban development:

1. General context
2. Motivation for using LVC instruments in this context
3. LVC instruments set up and legal framework
4. Results
5. Suitability of the chosen instrument for this particular case
6. Success factors/replicability and up-scalability
7. Sources and further reading

In each case the aim was to provide as much information as possible to all of these elements. However, due to limitations to the availability of information from accessible sources, some case descriptions are more comprehensive and accurate than others.

1. The financing of the redevelopment of Lideta, Addis Ababa, Ethiopia

PUBLIC LAND LEASING



General context

As one of the first redevelopment initiatives, following a city-wide urban renewal programme that was part of the 2003 City Structure Plan for Addis Ababa, the Lideta project focused on the inclusive revitalization, by road network improvements and additional development, of a total area of about 89 hectares, with the first phase tackling about 26 hectares. The project's key components were on-site relocation, densification, and land readjustment. Land readjustment and densification in particular were introduced to regularize city blocks and road networks to make it easier to lay out infrastructure and to pool land, the sale of which was meant to recover the cost of public investments in the area. Development costs of all these components were meant to be recovered by through land leasing, the sale of residential apartments and commercial building, and property taxes. (Mahendra et al., 2020).

Motivation for using LVC instruments in this context

The 2003 City Structure Plan laid out a citywide urban renewal programme, designating 2,000 hectares of land for redevelopment. Though Ethiopia had reestablished private land ownership rights, including the right to buy, sell, or transfer land between private actors with a newly drafted constitution in 1995, at the end of a civil war, all land titles still ultimately belonged to the government. While the leasing system acts more like a freehold than a leasehold system in that many of the land rights are bundled for transfer on the market, it is technically a leasehold system with different lease periods dependent on use. This allows Addis Ababa to generate revenues from auctioning land to reinvest in infrastructure and low-cost housing for residents (Mahendra et al., 2020). The land-based revenues provide a large potential for covering the city's investment costs for the urban renewal programme.

Land readjustment in Lideta, an integral part of the redevelopment process, allowed for additional land to be leased and revenue collected (figure 1.2). All buildings in the site area were demolished, redesigned, and built with improved capacity and higher quality infrastructure.



Figure 1.1: Lideta Neighbourhood Design

LVC instruments setup and legal framework

From the mid-1990s on, Addis Ababa has been experimenting with three LVC mechanisms to generate revenue for development projects:

- **Roof Tax and Permit Holding Fee:** calculated by taking a small percentage (less than 2 percent) of the cost of a built-up property; acts as a substitute for a formal property tax system;
- **Leaseholding System:** introduced in the 1990s to restore land value and create bundled property rights;
- **Capital Gains Tax:** a tax on the increase of property values that is the result of the city's investments in public infrastructure and development projects, currently levied as a percentage (around 7 percent) of the selling price of a property during transaction.

The main funding of the redevelopment costs of the Lideta project comes from revenues generated from land leasing. These revenues were not directly reinvested in the project area but, rather, the city at large (Mahendra et al., 2020).

Results

Mahendra et al. report that the initial investment for this project was provided by the city budget, with revenue generated from land leases going to the city treasury. Table 1.1 shows that more than USD 42.3 million¹ was spent on land acquisition and infrastructure provision, and so far about USD 17.4 million was generated from lease revenue, resale of spaces for shops and the sale of condos. The potential total revenue, however, is calculated at USD 41.6 million, largely covering the initial development costs. The project has benefited from a strong increase of the market value of the land. While at the start of the project it was estimated that land would be leased for an average of USD 127.50 per m², land was leased for double the estimation at USD 255 per m², meaning that the development cost was recovered from 3.6 hectares of land currently under development sold in auction (out of a total of 5.1 hectare of land for auction).

¹ Conversion rate (2014): 1 USD = 19.63 ETB

Type of expense	Amount spent (ETB)	Amount spent (USD)	Amount collected (ETB)	Amount collected (USD)	Notes
Land acquisition/compensation	179,638,955	9,151,246	20,120,935	1,025,009	Lease revenue (3.6 ha of land, 10% of 201,209,350.20) collected
Infrastructure development (road, water, power, and telephone lines)	154,503,798	7,870,800	242,645,272	12,360,941	Resale of 128 space for shops (commercial use)
Housing construction of 51 buildings (inputs + consultants fee)	497,642,793	25,351,136	79,401,614	4,044,912	Sale of Condos (21.32% of 372,371,776) collected
Total	831,785,547	42,373,181	342,167,821	17,430,862	

Table 1.1: Development Cost and Revenue Generated in Lideta Project

Suitability of the chosen instrument for this particular case

Despite the (potentially) favorable financial results of the project, according to Mahendra et al. the outcomes of the Lideta project are nevertheless problematic. In financial terms, the government was not able to use the full potential of LVC. The lack of a transparent, place-based destination of funds - instead of the current destination of these funds in the city at large - creates challenges for ensuring equitable distribution of the benefits of LVC in the city. Moreover, lack of sufficient institutional capacity and sub-optimal performance of the land market prevents the government to maximize land-based revenues.

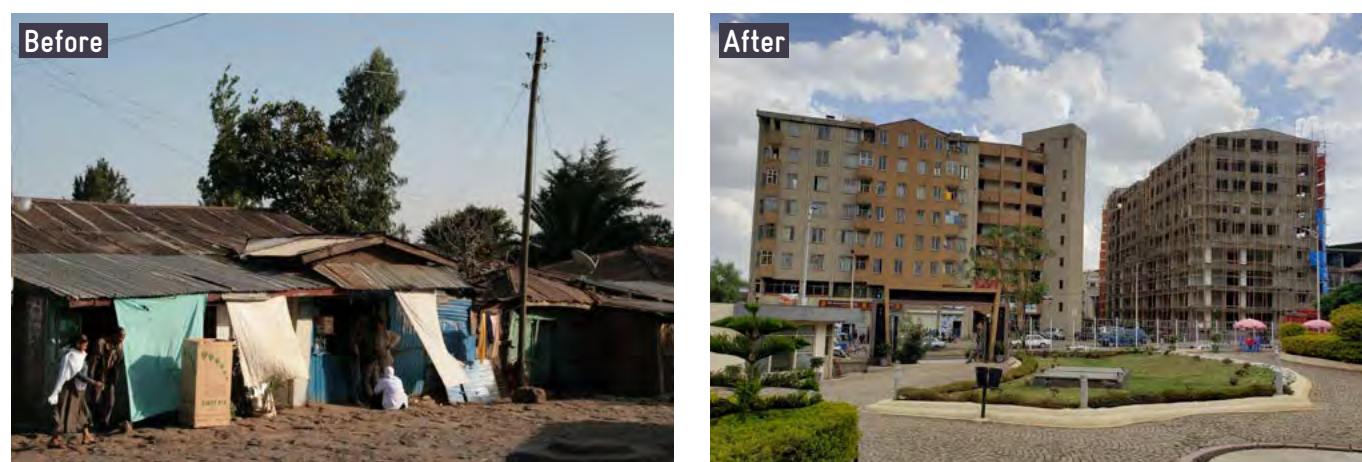


Figure 1.2: Before and After Intervention

Success factors, replicability/up-scalability

LVC potential in Addis Ababa is high, with a fast-growing economy and real estate prices rising. The leasehold system allows the government to continue generating huge revenues from auctioning land, while land readjustment can create opportunities for making land available for future development. However, as Mahendra et al. argue, challenges remain. These challenges seem to relate to institutional capacity problems that need to be resolved, to make the best use of LVC mechanisms in capturing increases in land values. However, Mahendra et al. claim that the larger issue here is with equity impacts related to the LVC mechanism. Despite efforts to make the Lideta neighbourhood more liveable, gentrification has hurt the original residents, as most displaced government housing residents did not return to the new high-rise condominiums due to the sizable down payment required. As of today, the Lideta project remains unfinished, and gentrification plagues the area. Although the original plan aimed to allocate a large portion of development to affordable apartment housing, poor project management has resulted in private developers constructing additional expensive high-rises in the area; and no formal resettlement or subsidized housing for displaced residents exist (Mahendra et al., 2020).

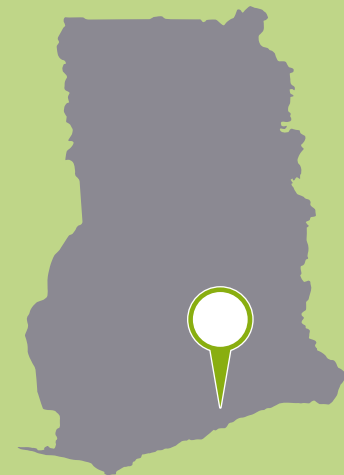


Sources / further reading

Mahendra, A., et al. (2020) Urban land value capture in Sao Paulo, Addis Ababa and Hyderabad: differing interpretations, equity impacts and enabling conditions. Working paper. Cambridge, MA; Lincoln Institute of Land Policy. Available online at: <https://www.wri.org/research/urban-land-value-capture-sao-paulo-addis-ababa-and-hyderabad-differing-interpretations>

2. Accra Airport City, Ghana

PROJECT-RELATED LAND SALES



General context

The Accra Airport City project I was conceived in 1994 as part of the Accra Urban Redevelopment Project.² The Ghana Civil Aviation Authority (GCAA), the Accra Metropolitan Assembly (AMA) and the Town and Country Department partnered to plan the area as a modern ‘miniature’ city (figures 2.1). The project area was originally part of the AMA, but after a decentralisation process (see below) it became part of a new municipality, named La Dada Kotopon Municipal Assembly. The project covers a total area of 40.83 acres of land subdivided into 29 plots. It is developed as a corporate and commercial hub, with high-density, mixed-use developments, including office space, hotels, restaurants, retail and car parks (Biitir, 2019: p. 44).

In 2006, the Ghana Airport Company (GAC) was established as a limited liability company, following up the GCAA in the development of the area. The GAC is responsible for planning, developing, managing and maintaining all airports and aerodromes in Ghana. In addition, its goal is to generate non-aeronautical revenue from the development of commercial land in and around the airports. The Accra Airport City project is one of their major projects. To recover the investments in infrastructure and site development, land value capture took place via a combination of project-related land sales and the use of an infrastructure levy (Biitir, 2019: p. 44).

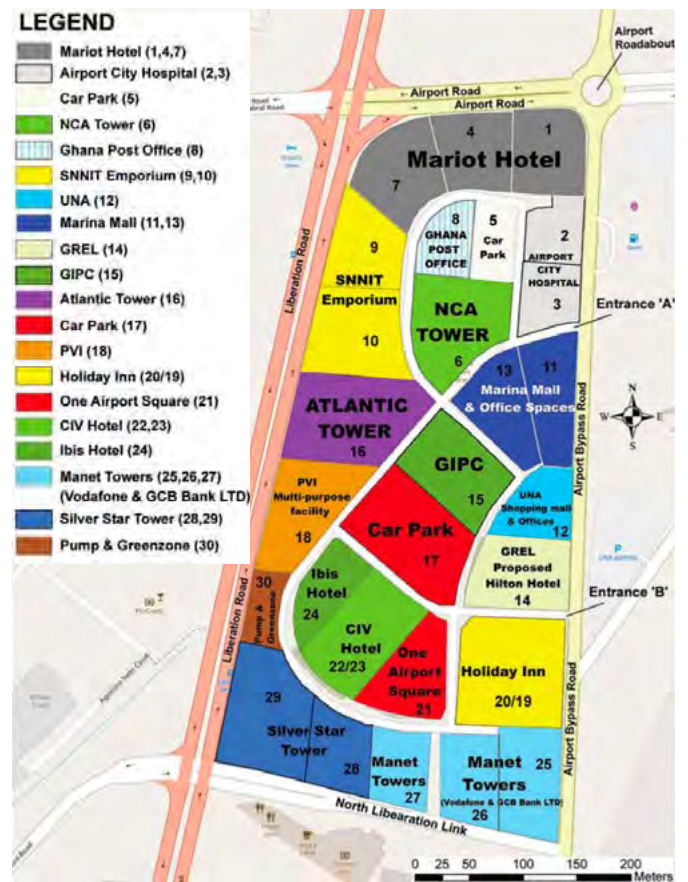


Figure 2.1: Airport City I Land Use Plan

² As a follow-up Accra Airport City II project has been planned to be developed; no further information available.

Motivation for using LVC instruments in this context

The land in the Airport City I project is publicly owned, after compulsory acquisition by the State, held and managed by the Lands Commission, on behalf of the State. In 1994, the Lands Commission granted the GCAA a 50-year lease term, to facilitate the GCAA's intention to convert the land use to commercial purposes. With the decoupling of the state-owned Ghana Airports Company Limited (GACL) from the GCAA, to handle airport development and commercial activities, the lease term was extended to 99 years. The GACL is entitled to grant 45-year term subleases to investors with the option of 10-year lease renewal upon expiration. Thus, this tenure arrangement allows the GACL to go into commercial land developments and to service the land to make it ready to use for investors and developers. Land was then auctioned and leased to the highest bidder. In addition to the payment of the premium on the land, developers were required to pay an infrastructure levy to the GACL, calculated on a pro-rata basis where each plot of land had a proportionate share of the total infrastructure costs. When a developer wins a bid, a one-time infrastructure levy, calculated as a per-cent of the land value, is paid in addition to the bid price. The levy is applied during the planning approval phase by the GCAA (Biitir, 2019: p. 47).

LVC instruments setup and legal framework

From the institutional context, in which the Airport City I project (and similar projects) in Ghana are being developed, three aspects play a crucial role (summary, based on Biitir, 2019). First, a strong decentralization process in the past decades has led to a fragmentation of the Greater Accra Metropolitan Area into a large number of Metropolitan, Municipal and District Assemblies

(MMDAs), with many of them lacking the resources to take the lead in much-needed urban transformation projects. Second, though MMDAs can make use of a variety of LVC instruments, including development charges, development or building permit fees and betterment levies, they often lack sufficient institutional capacity and sufficient awareness about the use of these instruments. Third, land tenure and land administration in Ghana is peculiar and complex, reflecting the unique traditional political institutions and socio-cultural differences of tribes, clans and families that acquired various interests in land through wars, conquest and assimilation and first settlements. The prevailing land tenure system in Ghana can be divided into two broad categories: public land and customary land. Customary land, including stool, skin, clan, family and individual lands, constitutes about 80% of the total landholdings in the country. While a detailed analysis of this land tenure system is beyond the scope of this case description, it can be derived from this that land tenure is not always secured, complicating the acquisition of land for urban development and scaring away private developers and investors.

Results

Though detailed financial data for the Airport City project are lacking, Biitir (2019) mentions that evidence from real estate agents indicate a substantial uplift in land values, from USD 200,000 per acre in 1998, before the project implementation to USD 300,000 to 350,000 after the area had been serviced with critical infrastructure and the land was auctioned. Whether capturing this uplift in land value was sufficient to cover the investments by GACL is unknown.

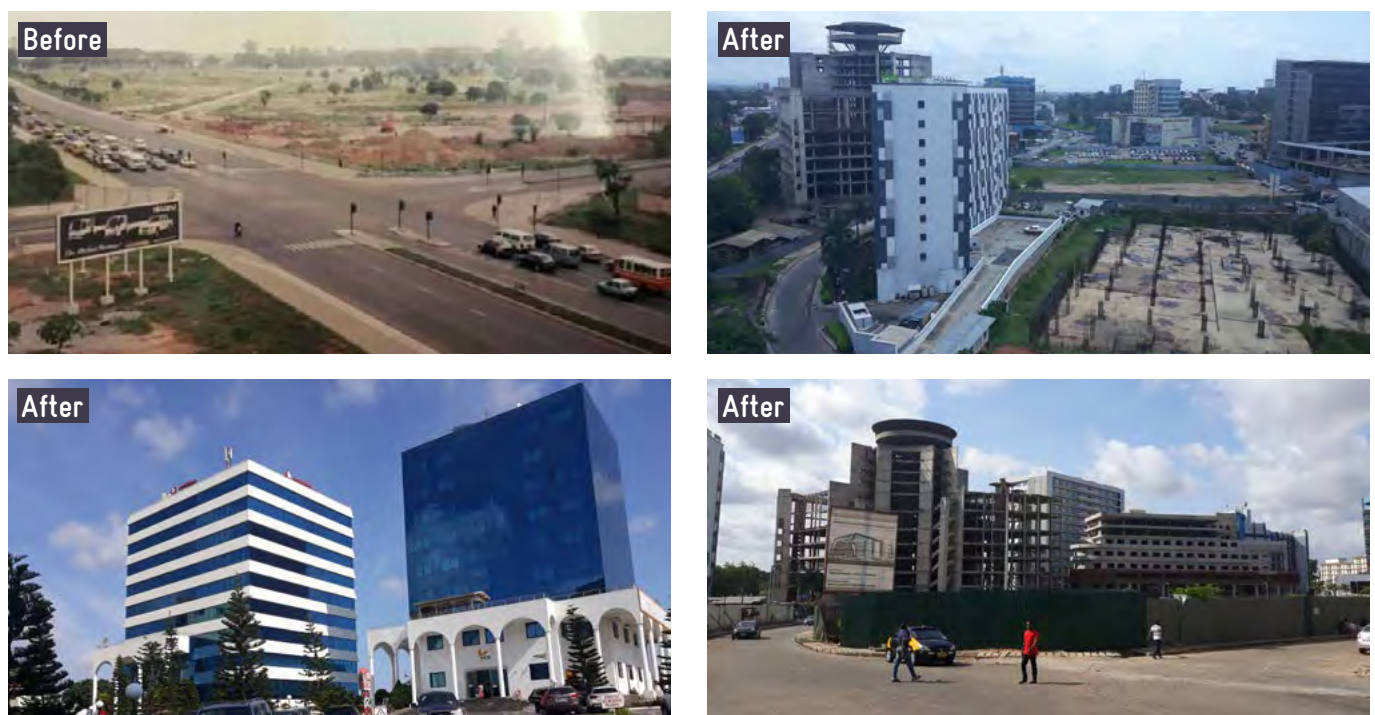


Figure 2.2: Commercial Development of Airport City I

Suitability of the chosen instrument for this particular case

Since many of the MMDAs in Ghana lack the institutional capacity and financial resources to initiate new developments themselves, partnership with (public) land developers like GACL offer new ways to promote urban development and improve infrastructure and allows for effective LVC through land sales. The activities of the public land development companies have thus enhanced the revenue potentials for the municipalities by the combination of property tax, building permit fees and development charges (infrastructure levies), while the land development companies make the collection of these revenues a lot easier (Biitir, 2019: p. 67) (figure 2.4). Biitir (2019: p. 72) therefore suggests for municipalities to strategically develop partnerships with land development companies, both for landbanking and development projects, financed through project-related land sales.

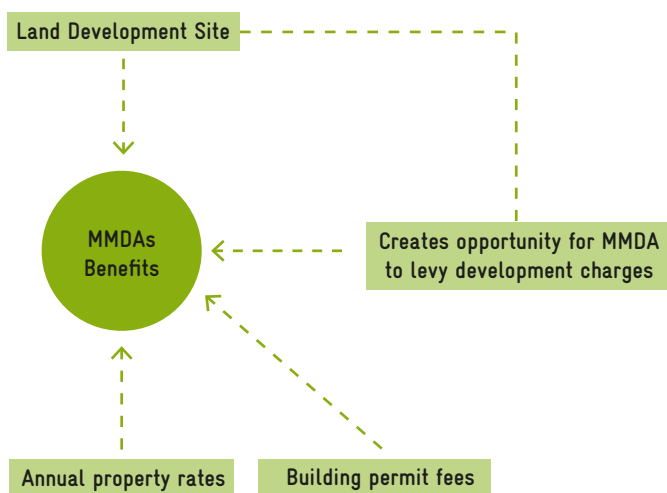


Figure 2.3: Revenue Streams from Land Developers

Success factors, replicability/up-scalability

Biitir (2019) refers to a number of factors that made the project a success. First, given that state and local authorities in Ghana (different from other Sub-Saharan African countries like Ethiopia) own only very limited amounts of land, LVC through project related land sales could only take place here by the state's decision to acquire the land prior to the development, using its eminent domain. Second, market conditions obviously matter, determining the demand from the private sector to lease land for commercial use. The Airport City I project, as other commercial developments in Accra, clearly responded to a growing demand for new 'cities' within GAMA. Third, taking into account land tenure complexity in Ghana, the tenure security that was offered in the project with the position of GACL as a kind of semi-public company contributed to the success of the project. GACL acted in fact as a public land developer. On the one hand, it is much more difficult for a traditional, private landowner to negotiate with the state about the lease and sublease of publicly owned land; and on the other hand, private developers that will sublease the land feel safe about their lease contract as well. Moreover, GACL – as a semi-public company - was able to obtain upfront financing to provide the infrastructure directly at the start of the project. Fourth, the decision to lease serviced land plots, with infrastructure services already provided increased the attractiveness of the location as well, as it was felt that infrastructure provision for the entire location is much more efficient than putting in the infrastructure 'site-by-site'. Fifth, LVC through project related land sales allows in principle for a very effective capturing of the uplift in land value. By including the infrastructure levy directly in the final sale price, purchasers of plots of land do not feel that there is an additional cost burden for infrastructure.



Sources / further reading

Biitir, S.B. (2019) Designing Land Value Capture Tools in the Context of Complex Tenurial and Deficient Land Use Regulatory Regimes in Accra, Ghana. Lincoln Institute of Land Policy: Working Paper WP19SB1. Online available at: <https://www.lincolninst.edu/publications/working-papers/designing-land-value-capture-tools-in-context-complex-tenurial-deficient>

3. Lessons from the Simesa project, Medellin, Colombia

LAND READJUSTMENT



General context

The Simesa project, located in the Colombian city of Medellin, exemplifies a Land Readjustment (LR) application that proposes transforming an industrial area of 30 hectares into a modern self-financed development for residential, commerce and services uses. At present, the project is still under development (with about half of the project area transformed). The intervention area accommodates five major plots subdivided into 37 management units. The management units work as Partial Plan stages, based on an urbanisation license for each unit. The Partial Plan recognises different interests, opportunities and motivations by the landowners in the five major plots. Thereby, the plan establishes the principles of autonomy, coexistence and flexibility (García, 2014). These three principles granted an agreement basis of trust that is still part of the project development, and they will be further explained in the section 6.

Motivation for using LVC instruments in this context

The Simesa project concerns the transformation of a former industrial area. According to García (2014), the 1999 POT Plan (Plan de Ordenamiento Territorial, land use plan for Medellin) had already recognised the strategic location of the current Simesa project as a trigger to improve the urban quality of the area by developing projects rich in land use-mix. One of the projects' accomplishments was to convey to different actors that the renewal of this area would be of crucial importance for the city of Medellín, but that it would be beneficial to the individual landowners in the area as well. The mechanism of land readjustment (LR) was introduced to combine these two aims.

Striking in the case is how the relocation occurred. The factories' resettlement process was a negotiated process that was being developed while the new area design was in course—facing issues such as resistance between public and private interests and opposition from the community, among others. Nevertheless, the partial project state shows that benefits prevailed in the interest of all involved actors, granting land value mobilisation obtained from a fair balance of burden and benefits.

LVC instrument setup and legal framework

As a mechanism for land consolidation, land readjustment—also known as land pooling, replotting, land reassembly, re-parcelling, and repartition—assembles and re-parcels land by possible swapping of land positions among landowners without the need for any transaction, so that part of the land can be used for public services and infrastructure that benefits existing landowners as well as the city. A government agency assembles (often irregular) land parcels and then subdivides them into a planned grid layout of streets, open spaces, and serviced lots. Some of the plots are retained for cost recovery, while the remaining plots are transferred back to the landowners for development or sale. The process is most popularly used when land parcels are fragmented, and existing boundaries are in conflict with proposed planning outlines. The mechanism supports land-based financing of the proposed development plan in the sense that in addition to land required for infrastructure development, a portion of land is retained by the public agency for commercial sale in the market to recover the cost of development. The underlying assumption of LR is that all necessary public infrastructure costs will be paid from the development gain that results from the proposed development, while at

the same time all individual land and property owners in an urban land readjustment project share the development gain (and the risks) of the (re)development of the area equally.

Land Readjustment was introduced in Colombia in the Urban Reform Act (9/89) by allowing land assembly through expropriation, enabling serviced plots and several types of urban infrastructure. This background favoured the Territorial Planning Act (388/97) as a guaranteed tool for fair distribution of charges and benefits and better global order of land plots. Later, in 1997 Law 388 established that Land Readjustments were forced to either accomplish a good quality final configuration of properties or guarantee fair costs and benefits redistribution outcome.

Results

As a result of the Land Readjustment scheme a substantial uplift in land value appeared. This allowed the city government to use 19% of the land value increment for funding of urbanisation costs such as public amenities and basic infrastructure (Smolka, 2013; Rojas & Rave, 2013).

Suitability of the chosen instrument for this particular case

The Simesa Project was implemented in a Redevelopment area defined by the Land Use Plan of Medellin, known as Plan de Ordenamiento Territorial or “POT” (Land Use and Zoning Plan). This specific plan area allows for a broader range of land uses and urbanisation incentives. For instance, 40% of the available building area in each major plot was assigned for services, commerce, and productive activities different from housing purposes -as a strategy to ensure a harmonic land use mix. According to Rave & Rojas (2014), the regulatory framework provided by this zoning plan favours determining charges and incentives, encouraging transparency and legal legitimacy, but on the other hand, reduces the state handling for obtaining uplifts in land values. Thus, Rojas & Rave (2014) unveiled an essential aspect of Land Readjustment as an LVC instrument. The basis of these instruments is given by management aspects, such as a clear understanding and transparency of its implementation, which grants legal legitimacy. But necessarily, these conditions answer to a political interest of having them. In other words, not only the legal aspects are relevant for the LVC implementation process but also the cultural basis that motivates political endeavours to strengthen them.

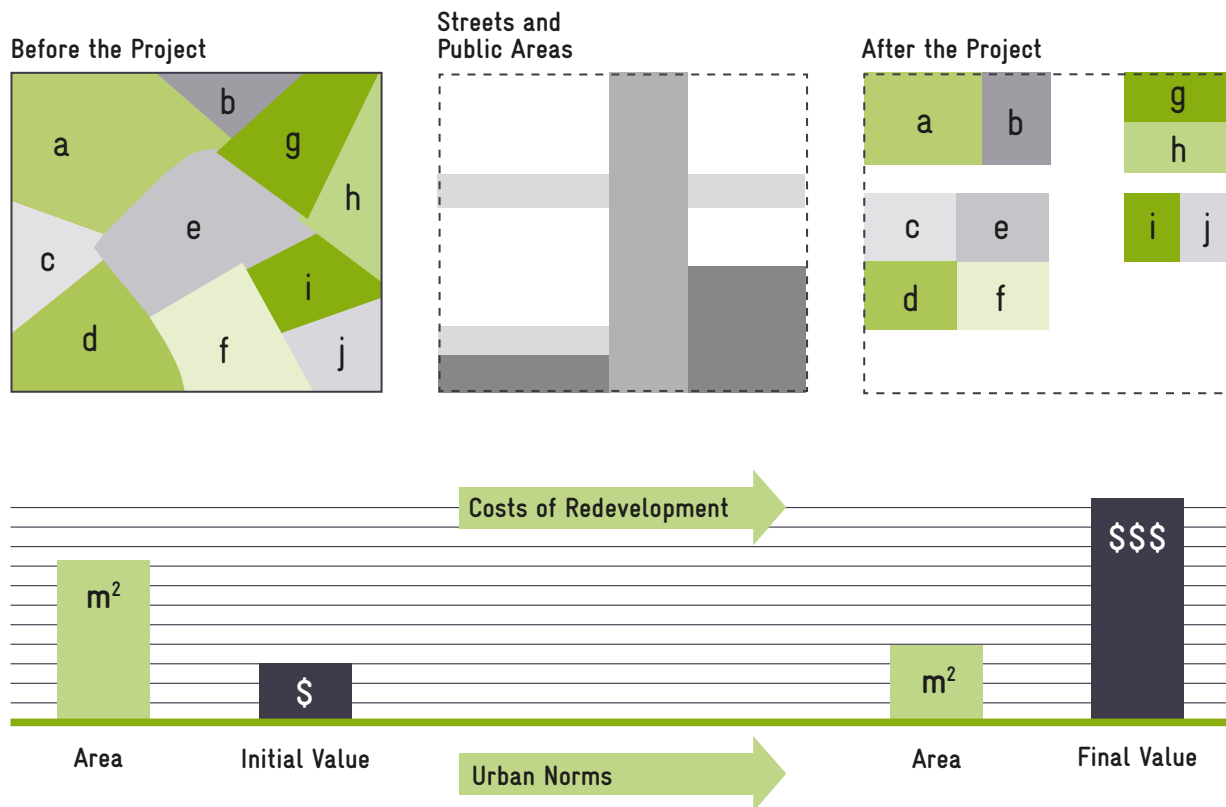


Figure 3.1: Schematic presentation of Land Readjustment.

Success factors, replicability/up-scalability

There is an essential institutional capacity feature to underline. Usually, the Land Readjustment structure consists of a public or private managing entity in charge of property rights, financing, development, building unit sales and land restitution (Rojas & Rave, 2013; Smolka, 2013). The Simesa Project, however, did not include such a managing entity, but was still successful. The necessary legal structure for the project implementation came from the regulation approved in the initial plan. According to Garcia (2014), to tackle divergent interests in the project planning stage, three principles that served as the basis for the entire management strategy were essential: autonomy, co-existence and flexibility. The autonomy principle recognised each landowner's conditions in the decision-making process of the plot renovation. The co-existence principle considered that new urbanisation processes do not have negative externalities towards pre-existent area developments (adjacent areas to the Simesa project). Finally, the flexibility principle established the possibility of having a wide range of different mixed land use options, according to the vocation of each Partial Plan –fostering an adaptability criterion in a context of changing market conditions.

Moreover, with a considerable number of stakeholders involved, it is crucial to have clarity of their own interests to ensure their engagement. The Land Readjustment implementation in the Simesa project displays impressive results in achieving consensus from diverse actors. Despite this diversity –public authorities, landowners, investors– the original industrial owners of the plots were few, had similar interests and encouraged a plan developed in stages acting as a whole (Rave & Rojas, 2014; Smolka, 2013). To García (2014), it was not just relevant that different actors accomplished agreements but also that municipal authorities served as endorsements of these agreements. In other words, what made the project successful was that landowners agreed to work on a single urban structure, but still developing one project at a time (Rave & Rojas, 2014). These features showed that leadership and trust in the institutional gear were crucial for reaching a positive outcome.

To sum up, the Simesa project in Medellín draws six considerations for its implementation in other places (Rave & Rojas, 2014):

1. The existence of a regulatory framework that sets guiding principles and grants stability and continuity;
2. Availability of real estate market information;
3. For the developers, it is essential to interpret public priorities with authorities to foster mutual interest among parties;
4. Governments should count on a multi-disciplinary team with sufficient management and technical capacity;
5. Develop strategies to attract capital investment even for developments that in general may not be attractive for private developers, such as social housing or urban regeneration, by offering tax incentives and benefits schemes;
6. Together with the Land Readjustment mechanism, the project's experience highlights linking Partial Plans with regulatory frames containing tools such as public land banks and expropriation.



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Key informant: María Cristina Rojas

4. Songshan Project, Taipei, Taiwan

LAND READJUSTMENT



General context

The Taipei Songshan Urban Land Readjustment project was implemented between 1981 and 2007, initiated by the Department of Land Administration of Taipei. The project area covered 151.69 hectares (buildable area: 69.88 hectares; sites for public facilities: 81.81 hectares) and included 793 landowners. Before 1981, 11,000 inhabitants lived in the area; after completion of the LR project population size had increased to 60,000 (Lin and Ding, 2018).

The basic idea behind Land Readjustment is that a re-parcelling of land takes place by way of swapping land positions between the landowners, to solve problems of fragmented ownership and irregular shape, without any transactions taking place, in order to supply well-shaped parcels of land, while part of the land will be used for public services and infrastructure. Usually, it is assumed that LR is a self-financing strategy, because all necessary public infrastructure costs will be paid from the development gain that is the result of the proposed development: re-parcelling of the land results in higher land values. This philosophy applies to Land Readjustment in Taiwan as well. Even though only 3% of the urban areas of Taiwan – with the majority in the six major cities - have been developed through Land Readjustment, the history of Land Readjustment dates back, at least, to the Japanese colonization period (1895-1945) (Lin and Ding, 2018).

Motivation for using LVC instruments in this context

Figure 3.1 demonstrates the basic mechanism behind Land Readjustment. Through Land Readjustment, land previously used for non-urban purposes and without appropriate public facilities is converted into sites suitable for immediate urban development. Based on the “beneficiary should pay” principle, individual landowners pay the amount of establishment costs in proportion to the benefits they receive. There are two types of costs landowners are required to bear: 1) costs associated with incurred expenses, and 2) the costs associated with sites for public facilities. Engineering works, planning and management costs, and loan interest compose the costs associated with incurred expenses. These costs are paid by the contribution of part of the owners’ land to the government; the contributed land is called “cost-equivalent land”. Another part of the owners’ land is contributed to the government to pay for the costs associated with sites for essential public facilities. The land returned to landowners after readjustment is in principle assured to be 55% of more of their size before readjustment.³

LVC instruments setup and legal framework

Lin and Ding (2018) report that in Taiwan the government implemented all projects prior to the 1980s and that LR has significantly facilitated the process of urbanisation through the provision of land for urban development. In 1979, the Act of Promotion of Private-Owners Initiated Land Readjustment was enacted in response to the shortage of budget and personnel in local municipalities. This enabled private landowners to initiate a land readjustment project. Incentives such as tax deduction and low interest loans were offered under this act to encourage private owners to form a collective unity to undertake LR by themselves.

³ In the Songshan Land Readjustment Project 61.49% of the land returned to landowners after readjustment (see table 4.1)

Results

Lin and Ding report the following detailed results for the project (table 4.1):

Name of the project:	Taipei Songshan Urban Land Readjustment	
Location of the project:	Songshan district, Taipei city	
Name of the implementation agency:	Department of Land Administration of Taipei	
Project period:	1981–1983	
Implementation of the project period:	1981–2007	
Area of the project:	151.69 hectares (buildable area: 69.88 hectares, sites for public facilities: 81.81 hectares).	
Rights holders:	N° of landowners:	793
	N° of leaseowners:	–
Land evaluation, contribution ratio:	Decrease for public facilities:	30.08%
	Decrease for reserved land:	8.53%
	Total ratio of decrease:	38.61%
Implementation plan, stages:	–	
Total built-up area of the project:	Buildable area: 69.88 hectares (Floor-area ratio ranges from 200 to 630%).	
Density involved before and after the project:	Before: 11,000 inhabitants (partly was military uses). After: 60,000 inhabitants (dominated by commercial uses).	
Reserved land and additional built area:	12.21 hectares	
Land evaluation:	Increase of land value: 203%.	
Real estate market evaluation:	No information.	
Benefits to the local government:	Financial surplus: USD 1.43 billion. Saving of public budget: USD 0.76 billion (USD 0.62 billion for acquiring sites for public facilities and USD 0.14 billion for the construction of public facilities). Assessed property tax base rose by 23 times.	
Benefits to the landowners (and/or leaseholders):	The area after the land readjustment project became the financial center of Taipei city with high-end housing neighborhoods and high-quality public facilities, living environment and open spaces (this is the first area in Taipei where urban design control was introduced).	
Benefits to the investors:	The business-related facilities were equipped with bus transit stations, world exhibition centers, superior quality hotels, and the Taipei 101 (this area became very appealing for premium office spaces and international hotel chains).	
Principal and eventual conflicts (site/landowners):	There were military bases and villages in this area prior to the land readjustment project and resistance of residents came from their attachment to their homes.	

Finance of the project:	Reserved land was sold by public auction to pay for the project, and its total amount was USD 1.43 billion.
Total cost of the project:	Engineering works and loan interests: USD 0.14 billion.
Features of the project:	To achieve Taipei's urban development, the project employed a steering committee of urban design aiming large-scale building blocks and a mixed land use with high-end offices, malls and residential areas.

Table 4.1: Taipei Songshan Land Readjustment Project in Taipei, Taiwan

Suitability of the chosen instrument for this particular case

In Taiwan, Land Readjustment over the years has produced a variety of benefits, such as providing land for development, alleviating the government's financial burden in providing public facilities, and accelerating urban growth. However, as Lin and Ding (2018) explain, recent years have seen increasing opposition to Land Readjustment of some landowners and stakeholders, such as tenants, as well. The opposition has led in Taiwan to Land Readjustment becoming more difficult and time-consuming to implement. To initiate a Land Readjustment project in Taiwan, agreement needs to be secured from half the landowners, or less than half if the landowners own more than 50% of the readjustment area. This half and half majority rule is often criticized as being too easy to meet and gives too much power to bigger landowners. Another effect of initiatives for Land Readjustment projects is speculation. It may become attractive to acquire land and properties in future Land Readjustment areas, prior to the actual start of the Land Readjustment process.

Success factors, replicability/up-scalability

From a more general, global perspective, Van der Krabben, Tiwari and Shukla (2022) argue that Land Readjustment is most popularly used when land parcels are fragmented, and existing boundaries are in conflict with proposed planning outlines. The mechanism supports land-based financing of the proposed development plan in the sense that in addition to land required for infrastructure development, a portion of land is retained by the public agency for commercial sale in the market to recover the cost of development. Moreover, all individual land and property owners in a Land Readjustment project share the development gain (and the risks) of the (re)development of the area equally. Under Land Readjustment, they receive a new parcel of land, proportional in size or value to the original land parcel, that offers them the opportunity to benefit from the new development.

Land assembly and development through Land Readjustment generate desirable outcomes for all stakeholders by creating planned development patterns, increasing land values, and limiting displacements. This is not to say that the process is free of challenges. Often it is difficult to get landowners on board when they do not recognize the social function of property, or distrust

the motives, commitment, and abilities of the government and sponsors, and are consequently less motivated to contribute a portion of land for public amenities.

A perceived major drawback of Land Readjustment is the long gestation period for project execution and fulfillment. Another drawback of Land Readjustment programmes is that they lead to speculation on land markets and a rise in land prices, with the result that objectives such as providing low- and moderate-income housing become untenable.



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5. Rail Plus Property Programme, Hong Kong SAR, China

PUBLIC LAND LEASING



General context

Hong Kong Special Administrative Region (SAR), China, is one of the few Asian global cities whose rail transit generates a substantial operating profit, for a large extent due to the income Mass Transit Railway (MTR) Corporation generates from its Rail Plus Property Programme. The Mass Transit Railway (MTR) Corporation was established in 1975 as a government-owned enterprise to build, operate, and maintain a mass transit railway system for Hong Kong SAR. In 2000, it was succeeded by the MTR Corporation Limited and about 23 percent of its shares were offered to private investors. The Rail Plus Property programme combines transit investments and operations with activities in large property development and long-term asset management. More than half of the revenues from MTR Corporation Limited, operated as a semiprivate railway entity, comes from a value capture

mechanism recouping the costs of transit investment, operation, and maintenance, using development rights of publicly owned land and leasing some sites granted by the government, working with private developers (Murakami et al., 2015: p. 71). The Rail Plus Property Programme is based on a strictly-applied transit-oriented development model underlying urban planning, with the majority of urban extensions planned in the vicinity of the MTR stations (figure 5.1).

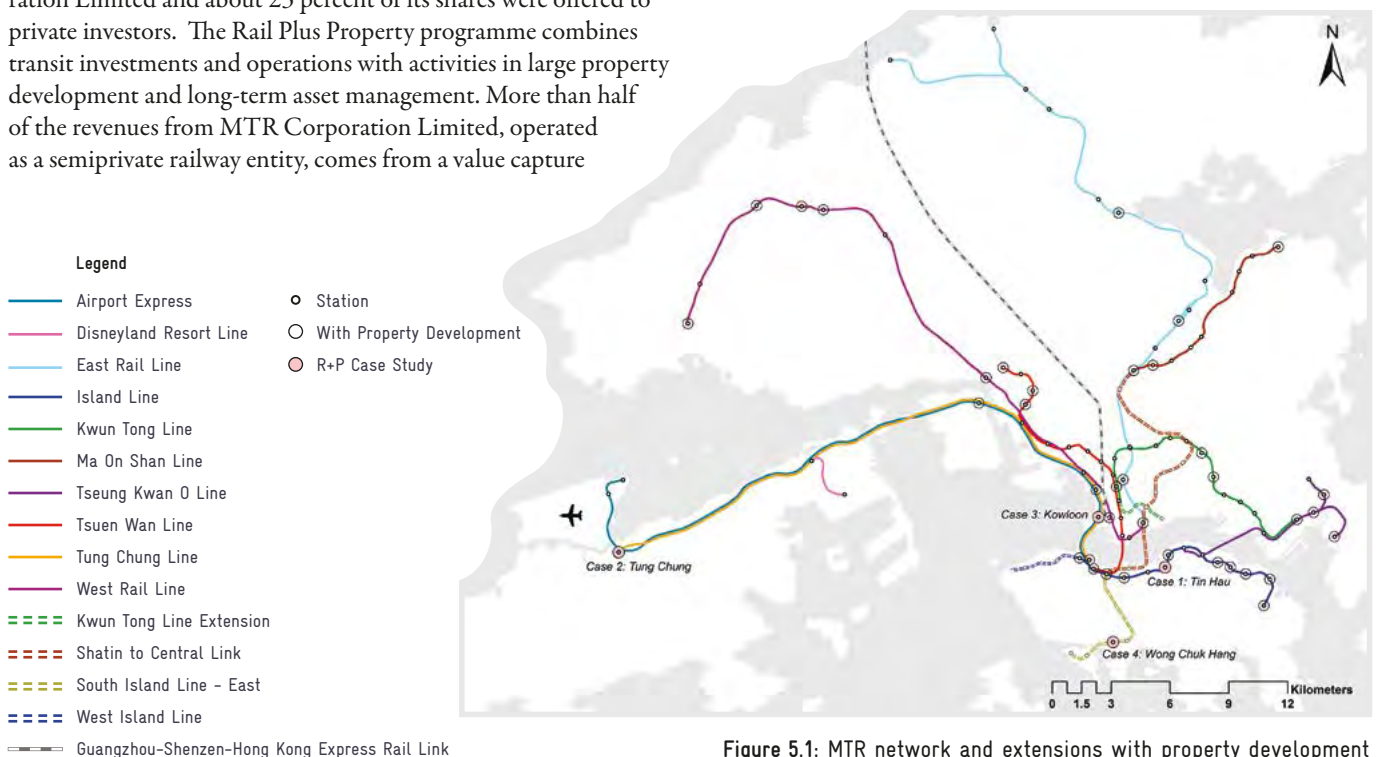


Figure 5.1: MTR network and extensions with property development

Motivation for using LVC instruments in this context

Rail Plus Property (R+P) development is a core part of MTR Corporation’s business model, capturing real estate income to finance the capital and running costs of new railway lines as well as higher rail transit patronage from the high-quality catchment areas created and managed by the company (Suzuki et al., 2015).

LVC instruments setup and legal framework

The basic mechanism for capturing MTR Corporation’s added (land) value is through public-private transactions and partnerships. Under the R+P Programme, the government – as the owner of all land in Hong Kong SAR, exclusively grants to MTR Corporation development rights over the land above and around new stations at the full market value “without the presence” of the new rail line (the “before-rail” market price). MTR Corporation uses these rights to partner with developers based on the full market value “with the presence” of the new rail line (the “after-rail” market price). The difference of MTR Corporation’s share of development profits between the before- and after-rail prices needs to be enough to bridge the funding gaps estimated by the company. It does not sell development rights to other private developers but instead partners with property developers. It remains in full control of the land and sells the completed units. This mechanism is fundamentally different from other LVC models, which sell off development rights of public land to private developers and subsequently lose control over the land (Suzuki et al., 2015: p. 81).

a. Usual government land leasing program



b. Rail Plus Property (R+P) program

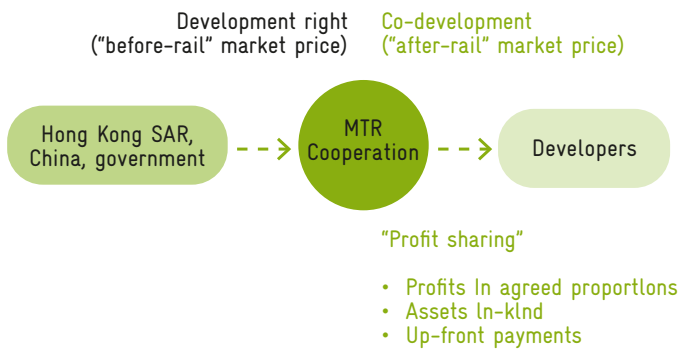


Figure 5.2: Rail plus property mechanism: Relationships among the government of Hong Kong SAR, China, MTR Corporation, and developers

Results

By using the extension of metro lines as a guiding principle for Hong Kong’s extension plans, the station areas have become high-quality, densely-built areas, usually with a mix of residential buildings, retail, hotels, office space and car parking. Like in most of the other station areas, in Kowloon Station, several developers participated in the project, paying a land premium to MTR Corporation and development costs (figure 5.3). MTR Corporation has negotiated with developers to derive benefits from the property developments through sharing profits in agreed proportions from the sale or lease of the properties (after deducting development costs), sharing assets in kind, or receiving up-front payments from the developers (Suzuki et al., 2015: p. 82).

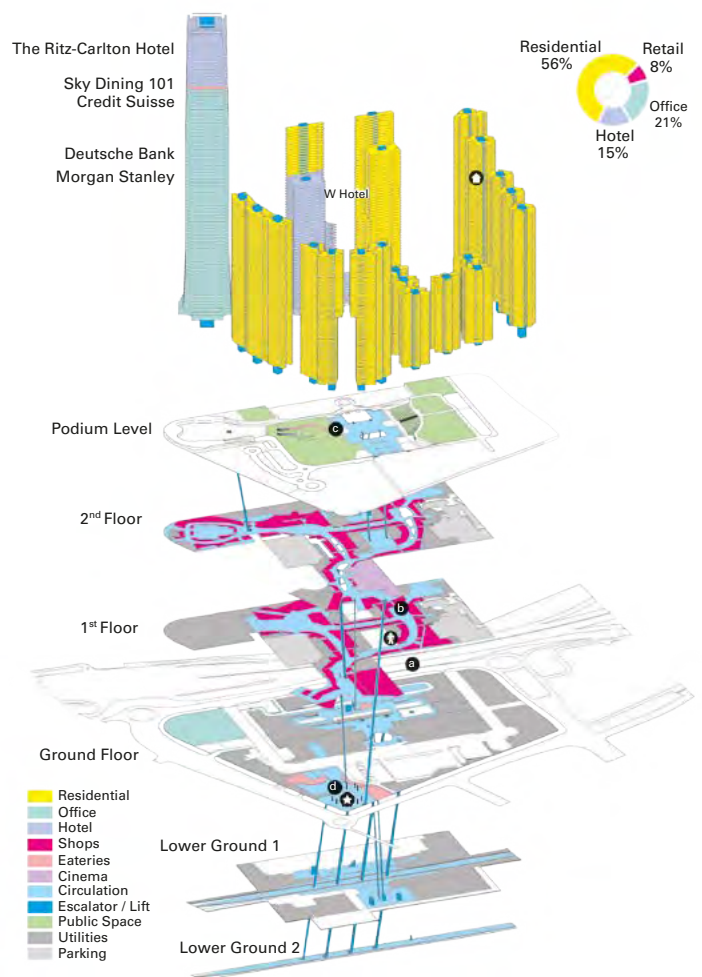


Figure 5.3: Rail plus property development layers stop Kowloon

Figure 5.4 shows the financial results for the MTR Corporation. From 2000 to 2012, property developments – presenting the revenues from land value capture - produced more than 38 percent of MTR Corporation’s net income, transit operations 34%, and station commercial and property management business about 28% (Suzuki et al., 2015: p. 82).

Although entitled to capture the land value added by R+P, MTR Corporation has never been the sole beneficiary of R+P. Society has also reaped substantial rewards through this financial approach: from 1980 to 2005, the government received an estimated USD 18 billion⁴ (Suzuki et al., 2015: p. 81).

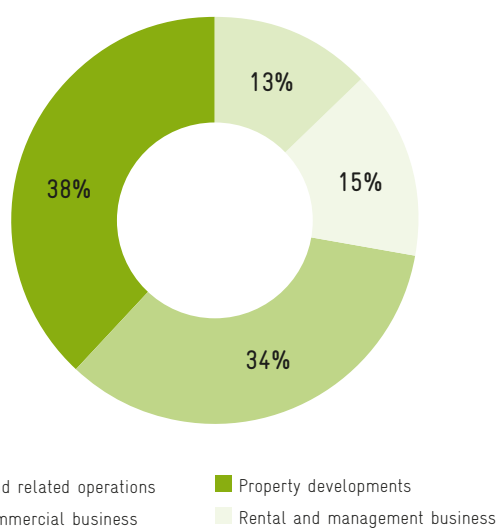


Figure 5.4: Shares of MTR Corporation net income, 2000–12

Suitability of the chosen instrument for this particular case

The state leasehold system for land enables the use of the R+P model. In the R+P model, MTR Corporation is the “master planner and designer” to align the interests of multiple stakeholders in different project phases. It prepares a development layout plan, resolves all interfaces with rail stations, takes care of tendering land parcels, acts as a liaison between the government and developers, monitors development quality and the sale of completed properties, and manages properties after completion. MTR Corporation’s formula for property business is based on minimizing direct risks in property development projects, reducing the company’s exposure to the real estate market and its related risks. For their part, developers must cover all development costs and cope with all project risks. Though these risks are with the developers, they still benefit from the mechanism, since the rules of the game are very clear at the outset, which eases uncertainties (Suzuki et al., 2015: p. 81).

⁴ Conversion rate (2015): 1 USD = 7.78 HKD

Success factors, replicability/up-scalability

The success of Hong Kong’s Rail Plus Property value capture model is based on the combination of a state leasehold system for land, extreme urban density, a transit-oriented development (TOD) model underlying urban planning, entrepreneurial city authorities and transit agency, a solid legal framework, and well-established operating procedures (Murakami et al., 2015: p. 71). While the state leasehold system for land has been crucial in the success of the Rail Plus Property Programme in Hong Kong, other global cities might see opportunities for applying the model, with adjustments, as well, allowing their planning departments and transit agencies to manage land supply and site design. The Asian Development Bank (2019), for instance, has promoted the model to be implemented in cities like Bangkok, Jakarta and Manila. Probably the most significant condition for success is state control or public ownership of land in the station areas. Another crucial success factor is the strictly-applied TOD model that to a large extent defines urban extensions.



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6. Financing a metro with development rights of public land, Nanchang, China

PUBLIC LAND LEASING



General context

Nanchang's central location in southeastern China, relative to the Pearl River and Yangtze Delta regions, and to the junctions of major highways, makes it an important transport hub (figure 6.1). This has led to strong economic growth that, in turn, triggered rapid urbanisation, with an expected increase of the population from 2.3 million in 2010 to a projected 3.5 million by 2025. To manage this rapid population growth, the impact on the present transport system and the growing congestion, the Nanchang municipal government (NMG) has designed an extensive public transport system with fully integrated bus services and metro railway networks. The city plans to build five metro lines; two were under construction in 2015 (Suzuki et al., 2015).



Figure 6.1: Location of Nanchang

Motivation for using LVC instruments in this context

In China, municipalities are responsible for city-level land use planning and investments in local infrastructure and services. For that reason, NMG established the Nanchang Railway Transit Group Co. Ltd. (NRTG), wholly city owned, to build and operate the metro system (figure 6.2). Nanchang's metro railway construction will require large capital investments. Aside from transfers from the national government, local tax revenues, fares, and loans from international development agencies like the World Bank, NMG has adapted a development-based LVC financing method to recoup land value increments generated by its metro railway investment to pay for part of the construction and operating costs (Suzuki et al, 2015: p. 168).

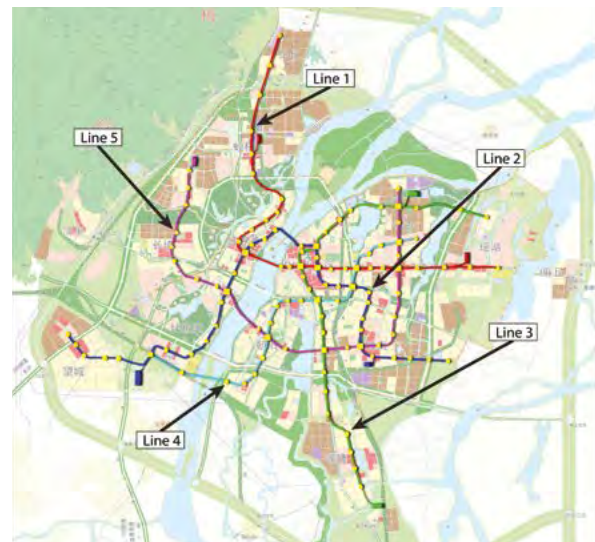


Figure 6.2: Lines 1-5 of the metro railway system, Nanchang

LVC instruments setup and legal framework

The LVC mechanism set up for this consists of three steps and has been developed to manage with the institutional settings of the land marketization process in China in such a way that NRTG can use the revenues from land and property development to finance metro railway construction. First, after the Urban Planning Bureau announces the City Master Plan and Land Use Plan, the Land Resource Center will acquire land for NRTG from landowners, with compensation, exercising eminent domain (expropriation). NRTG, which cannot expropriate the original landowners itself, will pay for all acquisition costs. Second, NMG will increase the floor area ratio (FAR) limit at the acquired sites (all land parcels within a 500-meter radius from a subway station) and allow NRTG to either invest directly in land redevelopment or transfer the development rights to private investors to raise funds to finance metro railway construction. Third, with the land resources in hand, NRTG will generate land revenue to finance metro railway development costs. For this, NRTG, through the Land Resource Center (that is the only institution with the authority to do so), will re-auction the land to developers at market value reflecting the increase in development density and land use change and the improved accessibility of the locations. The successful bidder will pay the bidding price to the Municipal Finance Bureau, which will in turn transfer most of that money to the NRTG. Additional to area development in the vicinity of the new metro stations, NRTG is allowed to develop the space above and below the metro railway station (Suzuki et al, 2015: p. 169).

Results

Suzuki et al. (2015) estimate the revenues from the sale of development rights in the vicinity of the metro stations for Line 1 and Line 2 a total of USD 5.8 billion.⁵ Balancing the estimated costs and benefits of accumulating land resource, NRTG is expected to generate a surplus of USD 820 million, which can be considered the total land value captured by the sale of development rights, equivalent to 15.1 percent of total construction costs of Line 1 and Line 2. Additionally, NRTG is expected to make profits from direct property development (partnering with private investors), consisting of mixed development on the ground above the metro stations and underground development. These investments are expected to bring a net profit of USD1.1 billion to the company, equivalent to 20.5 percent of the construction costs. All together, land-based finance is thus expected to cover around 35% of the total construction costs of Line 1 and Line 2.

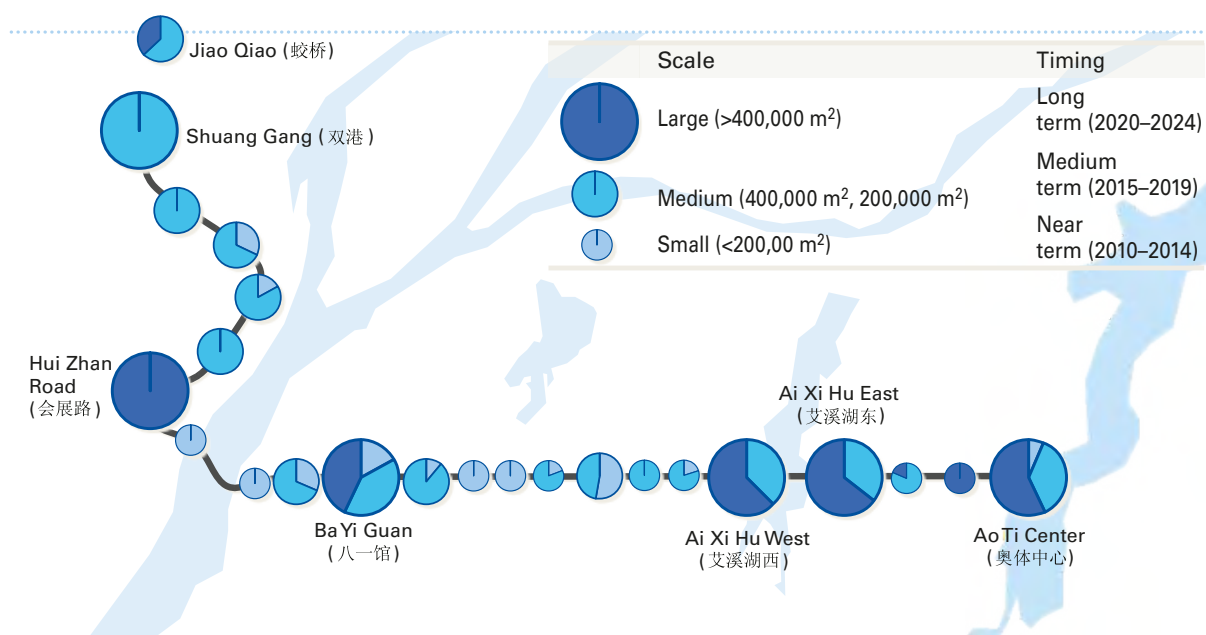


Figure 6.3: Sequence and scale of station development along Line 1 in Nanchang

⁵ Conversion rate (2015): 1 USD = 6.18 RMB



Figure 6.4: Metro Mansion Station

Suitability of the chosen instrument for this particular case

Under the state land leasehold system, land-based revenues have become a major revenue source for Chinese cities. In Nanchang, in 2011 38% of municipal revenues came from land revenues (Suzuki et al.). To maximize these land-based revenues, NMG developed a well-integrated urban planning and public transport plan, prioritizing transit-oriented development (TOD) projects in the vicinity of the metro stations. To make this all work efficiently, the city established a clear framework to allow transfer from land, development rights and capital flows amongst the Land Resource Center, NRTG, Municipal Finance Bureau, NRTG again, and private investors.

Success factors, replicability/up-scalability

A crucial condition for cities outside China to copy the LVC mechanism applied in Nanchang is the control of public ownership of land or development rights. Public ownership of land allows local governments to capture the increment land values resulting from land-use change, increased density rates and increased locational accessibility. However, even if land is not publicly owned, there can still be options to gain public ownership over development rights, allowing local governments to capture these increment land values. Another factor adding to the success of the case is the integration of urban planning and public transport investments, based on a TOD policy.

The city of Nanchang in fact managed to copy the Hong Kong SAR rail plus property model by bypassing the regulation for land development in China (Wang et al., 2019). At the same time, existing institutional barriers still limit possibilities for other Chinese cities to copy Nanchang's LVC strategy for co-financing the construction of its metro network. First, public land leasing programmes in China are not designed in transit-supportive ways. Land development rights around stations cannot be formally transferred to mass transit agencies at the start of the project. In

Chinese practice, once land has been attributed to a developer, this developer cannot subdivide the land or transfer rights to sub-developers. Moreover, since TOD development often involves the redevelopment of already built-up areas, fragmented property rights and the lack of urban redevelopment schemes often constraint implementing TOD and LVC in mass transit investment at city- and regionwide level. And finally, transit investment usually requires a long-term financing strategy, meeting the need for recurrent financial support for operation, maintenance and renewal. The sale of development rights, however, only offers a one-time revenue source for cities and actually fails to capture the long-term increase in value brought by mass transit (Suzuki et al., 2015).



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7. Certificates of Additional Construction Potential (CEPAC) and its applications, Agua Espraiada, Sao Paulo, Brazil

CHARGES ON BUILDING RIGHTS



General context

This case study addresses the Agua Espraiada development in Sao Paulo, Brazil. Certificates of Additional Construction Potential (CEPACs) are used in this project as an economic compensation for urban development.

In 1995, CEPACs were created to finance the Urban Operation (UO) of Faria Lima. Despite that CEPACs origin in 1995, it began operating in 2004 due to the approval of the City Statute (Estatuto de Cidade in Portuguese), enabling its use in the entire country. Between 1990 and 2002, Sao Paulo's municipality approved four UOs: Anhangabaú-Centro, Agua Branca, Faria Lima and Agua Espraiada. Sao Paulo's Master Plan, that was enacted in 2002, consolidated the mentioned four UOs and created nine more (Sandroni, 2010). The total area covered by these large-scale urban projects is equivalent to 20% of the municipality's urban area (1,500 km²).

Urban Operations (UO) in Brazil

According to Sandroni (2010: p. 218), Urban Operations (UO) can be described as "a tool for structural transformation of part of the city, basically promoted through a partnership of public authorities and private developers". Sandroni (2010) underlines two relevant features of this mechanism that links payment to incentives:

1. it draws private investment, and
2. it favours developments that are planned by a particular urban policy in a specific city perimete.

In other words, specific regulations are designed to fund public investments such as basic infrastructure, services, mobility, public space, and housing conditions (slums). Thus, changes in zoning provide incentives for landowners/developers who aim to build above the basic coefficient defined in the city's Master Plan -generating incremental value to fund works specified in UO.

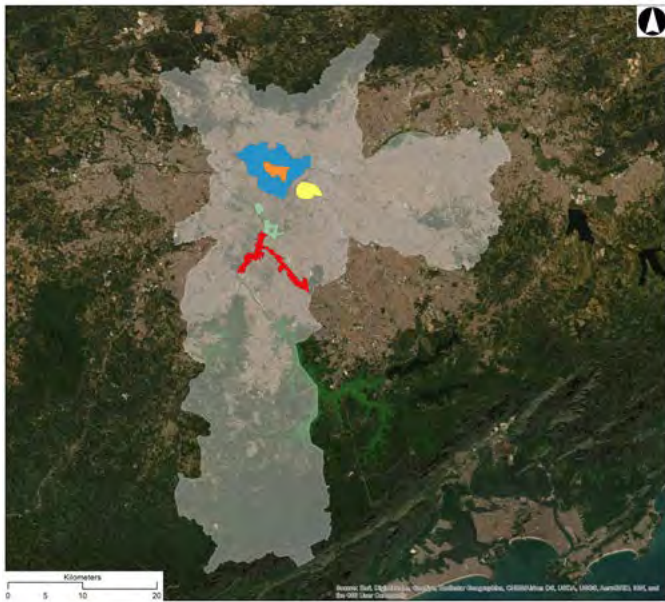


Figure 7.1: Map of Urban Operations in Sao Paulo.

- Legend**
- Sao Paulo municipality area
- Urban Operations**
- name**
- Agua Branca
 - Agua Branca (perímetro expandido)
 - Agua Espraiada
 - Centro
 - Faria Lima

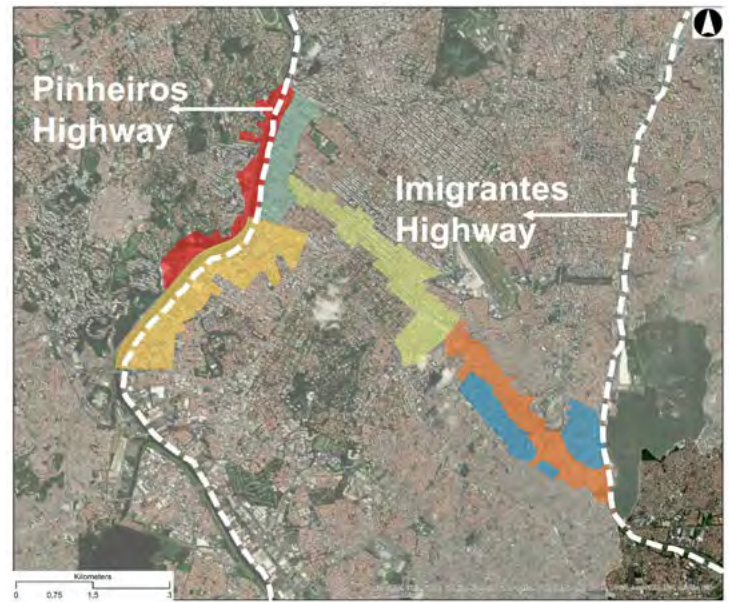


Figure 7.2: Map of Agua Espraiada sub-sectors.

- Legend**
- Urban Operations**
- Americanopolis
 - Berrini
 - Brooklin
 - Chucri Zaidan
 - Jabaquara
 - Marginal Pinheiros
 - Sao Paulo municipality area

Motivation for using LVC instruments in this context

In the early seventies, thousands of people moved to Sao Paulo looking for jobs. Many of them could only find a place to live in informal settlements -known as favelas. Jardim Edite was one of Sao Paulo's favelas located next to the Pinheiros River. According to Maleronka (2022), the area was not suitable for proper urbanisation due to constant flooding issues. Despite this problem, the favela kept its growth, consolidating as an informal settlement area with a significant lack of basic services provision to its dwellings. In addition, -and also related to the intense growing population that Sao Paulo was facing in the seventies- two important highways (Pinheiros and Imigrantes) were built to connect Sao Paulo with the port-city of Santos. Bartalini (2022) states that the government began expropriating properties along the Agua Espraiada stream. It was clear to city authorities that the Agua Espraiada stream was situated in a strategic area because it is located just between Pinheiros and Imigrantes Highways. Then, the idea was to build a highway to connect Pinheiros and Imigrantes Highways, facilitating transport connections between Sao Paulo and Santos. All in all, there was a great deal of tension between the city's infrastructure needs and the social consequences that this could bring to the community that was to be evicted from the

areas where the new highway needed to be built. Thereby, governments facing strong population growth and the challenges that come with it -such as providing basic infrastructure and housing solutions- could consider CEPACs as a financing alternative to expand budget capacity. Regardless of the specific context of Agua Espraiada Urban Operations, CEPACs were seen as an innovative tool to fund the urgent infrastructure needed to help thousands of citizens -which is highly relevant in a country with dramatic social inequalities. Figure 7.2 shows the Agua Espraiada Urban Operations division in sub-sectors and the location of the Pinheiros and Imigrantes highways.

LVC instrument setup and legal framework

In some countries such as Brazil, India, the Netherlands, and the US, markets for transferable development rights have been established to support land development. For this, usually two interventions are needed: first, the development right over land must be separated from the ownership right over land; second, a market must be created where trading of development rights can take place. In Brazil, the establishment of a market for transferable development rights enables local governments to raise an income from selling these rights. The income generated from selling the development rights can be used to finance the costs of urban transformation projects and/or public infrastructure.

CEPACs are issued by the city government in the stock market through auctions (Mahendra et al., 2020). The purchase of the CEPACs in the stock market grants the owner the possibility to build in a designated project above the basic coefficient established in the city's Master Plan. According to Smolka (2022), a relevant innovation introduced by CEPACs is allowing the market itself to decide for the price that they are willing to pay for the additional construction potential of land. Thus, revenues captured through CEPACs sales are invested in funding predetermined interventions based on a specific Urban Operation (Mahendra et al., 2020). The CEPACs processes are controlled by the Brazilian Security and Exchange Commission to ensure transparency.

Since the 1970s, Brazilian professionals engaged in urban development have been discussing several ideas about how to tackle rapid urbanisation processes that were taking place in large urban areas. One of the most relevant ideas was the notion of "created land" (Solo Criado in Portuguese) discussed in the Embu Letter in 1976. Furthermore, in 2001, with the enacting of the City Statute, the endeavours of reaching a more just city obtained a solid legal status. These milestones helped not only to build a city's vision but also to figure out mechanisms that enable municipalities to finance that vision (Lincoln Institute of Land Policy, 2022). Ferreira (2022) argues that the City Statute is known worldwide because of the series of mechanisms fostering urban justice -one of the keys was linking the property right to the concept of "social function of property". This concept implied that the use that landowners could give to their properties impacted society; therefore, urban regulations were entitled to draw limits from private development -allowing for public benefits from urban development.

Results

Table 7.1 shows the Agua Espraiada Urban Operations general results in terms of distribution, purchase and collected public income. Agua Espraiada UO has had five public distributions of CEPACs with a total of 17 public auctions and nine private collocations. According to Sandroni (2010), only the second public auction can be deemed unsuccessful because of the low purchase rate, in which 16,899 CEPACs were bought out of 70,000 offered. In addition, there were two other specific auctions where the purchase rate was low in 2008 and 2009. Overall, table 7.1 shows that the total percentage of CEPACs bought corresponds to 83.8% of the total offered in public auctions. In terms of income, the total revenue collected by Agua Espraiada UO rises above USD 1.4 billion and is considered a remarkable financial achievement.

Additional research (Mahendra et al., 2020) have pointed out that the CEPAC unit price has increased dramatically from the first public auction in 2004 until the last one in 2012 -from 305 BRL¹⁰ in 2004¹¹ until 1,271 in 2012¹² (317% unit price increment from 2004 to 2012).

⁶ Private auctions were used to directly pay contractors for the infrastructure works established for the UO (Sandroni, 2022).

CEPACs Distribution	CEPACs offered	CEPACs bought	% offered / bought	Income (USD ⁷)
1 st Public distribution: 4 auctions (2004–2006)	406,500	229,368	73.6%	49,666,048
2 nd Public distribution: 3 auctions (2007)	317,781	317,781 ⁸	100%	61,308,069
3 rd Public distribution: 1 auction (2008)	186,740	186,740	100%	100,135,942
4 th Public distribution: 7 auctions (2008–2010)	1,637,575	1,099,680	67.2%	349,238,594
5 th Public distribution: 2 auctions (2012)	1,500,000	1,360,338	90.7%	836,402,568
Private distributions: 9 collocations (2006–2008)	-	127,092	-	26,584,937
Total	4,048,5969	3,390,999	83.8%	1,423,336,159

Table 7.1: Historical CEPACs distribution of Agua Espraiada UO.

Suitability of the chosen instrument for this particular case

Siqueira (2019) warns that, with the CEPACS system in practice, the democratic legitimacy of government policy is at stake. The latter relates to the democratic aim of this entity, which is “to guarantee transparency and public participation in the decision-making process”. Siqueira criticises that the organisational structure has become an informative arena that legitimises decisions already taken by influential stakeholders. Hence, the quality of public participation should be improved due to an unbalanced power relation, which favours state and private sector interests to the detriment of communities. What is beyond this criticism is that regardless of the social contributions of the LVC instrument, it can still develop forms of displacement or false public participation with the ultimate aim of setting conditions that foster real estate development.

Concerning equity, other studies (Mahendra et al., 2020) recognise as well that despite the financial accomplishment of Agua Espraiada Urban Operations, the equity impact is not as successful. This critique holds that only 33.7% of the total income has been spent on works benefiting the low-income population -e.g., services and equipment- while 59.6% relate to road infrastructure. Furthermore, the authors underline that the social housing support was insufficient, considering the number of people that were displaced because of the highway construction.

Success factors, replicability/up-scalability

According to Mahendra (et al., 2020), there are three “enabling factors” that have helped the CEPACs to succeed as a land-based financing tool:

1. the real estate market dynamics in Sao Paulo,
2. the interest of private investors in the areas where the Urban Operations were developed, and
3. solid institutional support and transparency that has granted investment confidence.

7 Average conversion rate (2004 - 2021): 1 USD = 2.07 BRL.

8 9,008 offered CEPACs from the third 2007 auction included in the total amount of CEPACs bought were not distributed in the public auction. Instead, they were distributed in the Private Collocation according to the official record.

9 This amount refers only to the total of CEPACs offered in public auctions.

10 Brazilian real, official currency (Reais in Portuguese).

11 Conversion rate (2004): 1 USD = 2.92 BRL.

12 Conversion rate (2012): 1 USD = 1.95 BRL.



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Key informant: Camila Maleronka

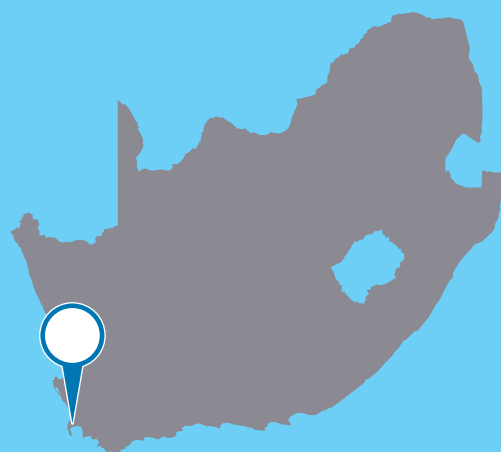
Annex: Shapefiles metadata¹³

Group	Urban legislation
Sub-group	Urban legislation
Layer name	Urban Operation
Description	Urban Operations aim to promote improvements in pre-determined regions of the city through partnerships between the Public Power and the private sector. Each area, object of Urban Operation, has a specific law establishing the goals to be accomplished, as well as the mechanisms of incentives and benefits. The perimeter of each Urban Operation is favored by laws that provide for flexibility regarding the limits established by the Zoning Law, upon payment of a financial contribution. This money is paid to the City Hall, and can only be used for urban improvements in the region itself. An Urban Operation law may contain non-onerous concessions, understood as an additional stimulus to the occurrence of investments in the area.
Scale	1:2.000
Reference date	20-05-2015
Responsible	São Paulo Urbanismo
Projection and datum system (consultation)	UTM/SIRGAS 2000
Projection and datum system (download vector or matrix file)	UTM/SIRGAS 2000 e UTM/SAD69
Update frequency	On demand
File type	Shapefile SAD69-96 and Shapefile Sirgas
Availability	Map and download
Mean	Intranet, Internet and WMS

¹³ Available in <http://geosampa.prefeitura.sp.gov.br/>

8. Special Assessment Districts and the financing of infrastructure in Claremont, Cape Town, South Africa

ADDITIONAL PROPERTY TAX



General context

Cape Town, South Africa's second largest city in terms of population (4 million inhabitants currently), is facing an expected further growth in population, reaching 4.5 million inhabitants by 2032. The consequence of the demographic growth is enhanced tensions for access to public infrastructure and services (Matiashe & Germond, 2020). The city is under pressure to find additional sources for funding of public infrastructure and services. In this respect, LVC is considered as one of the innovative financial models that can provide gap funding for much needed public infrastructure and services. Cape Town has successfully made use of the strategy of establishing special rating areas (SRA) that is commonly-used by South-African cities, to create Claremont Road Bypass Company (RoadCo), as a special purpose vehicle, to finance the construction of a road called Claremont Boulevard. Claremont is a wealthy suburb located about 10 km South of Cape Town CBD.

RoadCo has several features that make it unique in South Africa, including: 1) it is the only known instance in South Africa where levies from an SRA are used to finance the construction of large public infrastructure; 2) it is the only known instance nation-wide where an SRA entity contracted a long-term loan (from a South African development bank); and 3) the loan itself required financial and institutional innovations to comply with the prevailing regulatory framework (Matiashe & Germond, 2020).

Motivation for using LVC instruments in this context

Since 2000, SRAs have been used in South Africa to revive urban nodes across the City of Cape Town. Similar to the concept of Business Improvement Districts (BID), commonly used by cities in the United States, Great Britain and elsewhere, SRAs constitute a mechanism by which an additional property rate can be levied in a given area to finance "top up" municipal services within that area. In 2020, 41 SRAs were operating in Cape Town, with plans to establish 35 additional SRAs (Matiashe & Germond, 2020). The SRA for Claremont was established in 2000, with the intention to revitalize its CBD that had suffered from decline caused by the nation-wide economic recession in the second half of the 1980s and the revival of Cape Town's CBD. The construction of a bypass road (Claremont Boulevard), to decongest Claremont's main artery (Main Road) was considered a crucial part of the revitalization plans. Since sufficient funding was lacking – Cape Town council was reluctant to commit funding – the Claremont Improvement District Company (CIDC) that holds responsibility for managing the SRA proposed to finance the road on the basis of a partnership approach: CIDC would fund and build the bypass road, while Cape Town would take responsibility for land acquisitions, the construction of a new bus and taxi interchange, and the relocation of a health clinic. As a form of LVC, revenues from the additional property rates were used to provide the required funding by CIDC (Matiashe & Germond, 2020).

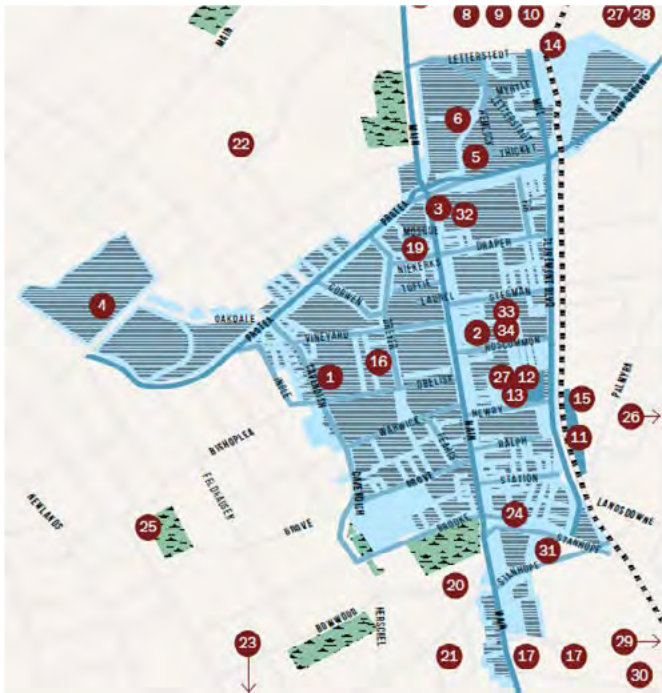


Figure 8.1: Map of Claremont Special Rating Area

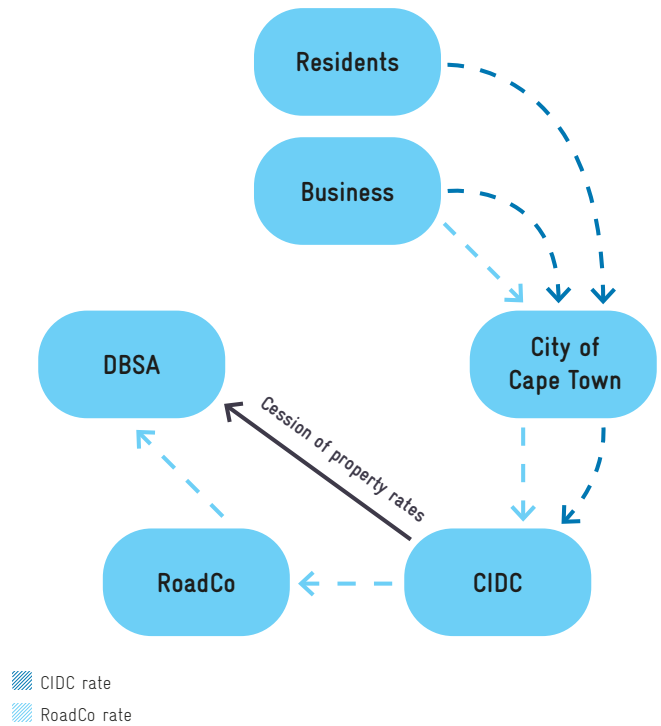


Figure 8.2: Institutional arrangement and financial flow chart

LVC instruments setup and legal framework

CIDC approached Development Bank of Southern Africa (DBSA), South Africa’s largest municipal lender, for a loan to fund the project, but two legal obstacles emerged:

- As an SRA, CIDC’s existence could not be guaranteed for more than five years;
- Since SRAs are funded through additional rates, their funding is only guaranteed on a year-to-year basis, depending on Cape Town’s budget decisions.

To overcome these challenges, RoadCo was established in 2006 both as a non-residential SRA collecting additional property rates from business owners within CIDC boundaries and as a special purpose vehicle managed by CIDC. Based on a cooperation agreement between Cape Town local government, CIDC and RoadCo, Cape Town undertook to pay to CIDC the rates collected from ratepayers within its area and in turn, CIDC agreed to pay to RoadCo the portion of the rates allocated to the payment of the infrastructure. With all this in place, DBSA signed the loan to CIDC to fund the project (Figure 8.2) (Matiashe & Germond, 2020).

Results

After the agreement on the funding of Claremont Boulevard, construction of the bypass road was commissioned in 2009. Its construction increased the attractiveness of Main Road which is believed to have substantially contributed (alongside other factors) to the successful revitalization of the business areas.

The total cost of the project amounted to USD 3.14 million.¹⁴ Cape Town contributed USD 1.64 million; RoadCo contributed USD 1.50 million, based on the portion it received from the rates collected by CIDC from ratepayers within its area.

Both property owners in the area and the Cape Town administration have benefited substantially from the revival of Claremont, with substantial increases in both property values and revenues from property taxes with CIDC boundaries (Matiashe & Germond, 2020).

¹⁴ Conversion rate (2020): 1 USD = 14.65 ZAR

Suitability of the chosen instrument for this particular case

Matiashe & Germond (2020) mention that the RoadCo initiative is a unique case in South Africa, since SRAs have never financed before the construction of large public infrastructure. The project itself required innovative financial engineering that helped to make RoadCo eligible to a bank loan. Interestingly, RoadCo is the only known instance nation-wide where an SRA entity contracted a long-term loan (Matiashe & Germond, 2020), allowing the Claremont SRA to fund a substantially bigger project than SRAs usually do.

The success of the project also depended on the willingness of the businesses property owners within the SRA to raise their SRA rate, based on a vote at the RSA special general meeting (approved by 98 percent of CIDC's members) (Matiashe & Germond, 2020).

Success factors, replicability/up-scalability

Several factors have added to the success of the RoadCo initiative, of which local leadership within the CIDC seems to have been of crucial importance. Other success factors were the healthy relationship between government and the private sector and the strategic and policy guidance provided by the City of Cape Town (Matiashe & Germond, 2020).

Despite the success, RoadCo has not yet been replicated elsewhere. According to Matiashe & Germond (2020), this might be due to lack of local leadership in other SRAs, insufficient institutional capacity within municipalities and legal constraints.



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9. The construction of the Outer Ring Road, Hyderabad, India

LAND-BASED FINANCING OF DEVELOPMENT PROJECTS



General context

The construction of a 158 km-long outer ring road (ORR) and the expected uplift in land value in the zones alongside the ring road offered the Hyderabad Metropolitan Development Authority (HMDA) opportunity, as in other cities in India (Mittal, 2014), to implement LVC mechanisms. HMDA, together with the Greater Hyderabad Municipal Corporation (GHMC), levy a variety of taxes, fees, and charges to generate revenue. Land-based financing mechanisms that are used include urban land value tax, place-based development charges, impact fees, betterment charges, regularization of unauthorized developments, auctioning of land, and a vacant land tax. However, most of these instruments do not capture any incremental increase in land value. The specific application of LVC (i.e., capturing an increase in land value over time) has been limited (Mahendra et al., 2020).

Motivation for using LVC instruments in this context

Fee-based LVC mechanisms are relatively easy to implement as the policy and infrastructure framework is already in place for Hyderabad to levy Special Development Charges (SDCs) and Development Deferment Charges (DDCs) around the ORR. In principle, the SDC mechanism captures some part of the increment land value that is the result from ORR construction. Moreover, the DDCs directly generate revenue for the local communities that apply the mechanism. However, the total revenue they can generate is rather limited. Potentially, Area Development Plans (ADPs) not only provide a mechanism to actually implement development projects benefitting from the ORR construction, making good use of the increased accessibility of the area alongside the ORR, but also offer HMDA valuable land for development, as a result of the pooling and redistribution mechanism.

LVC instruments setup and legal framework

In connection to the construction of a 158 km-long outer ring road (ORR), the Hyderabad Metropolitan Development Authority (HMDA) has implemented two LVC mechanisms – and considers to implement a third one - to capture part of the increment land values connected to the development opportunities that result from the ORR construction. While for the construction, operations and maintenance costs of the ORR alternative funding was available, the city of Hyderabad makes use of SDCs, managed by the city government, and DDCs, managed by local villages, to raise revenue to invest in development around the ORR. Additionally, ADPs have been considered as a third mechanism, but have yet to be implemented (Mahendra et al, 2020).

In the ORR project, HMDA intended to make use of three LVC mechanisms:

SDCs: fee-based value capture mechanism. The city charges up to 1.5 times the regular fee for building permissions, depending on the structure's height and its location along the corridor, in a 1 km buffer on either side along the length of the ORR (MAUD, 2016).

DDCs: fee-based value capture mechanism that charges site owners for keeping a lot vacant or undeveloped. The fees are collected by the HMDA on behalf of village local bodies and transferred back to them.

ADPs: development-based value-capture practice. Instead of charging a fee for development, ADPs are meant to create shared value through development schemes that bring benefit to the landowners as well as the local government. In these schemes, landowners would enter negotiations with the local government on development projects and would then be considered joint developers or equal shareholders in the project. As a type of Land Readjustment Scheme, the HMDA would pool together, develop, and then redistribute smaller but more valuable parcels of land to the original landowners, while keeping a share of the land under HMDA authority (Mahendra et al., 2020).

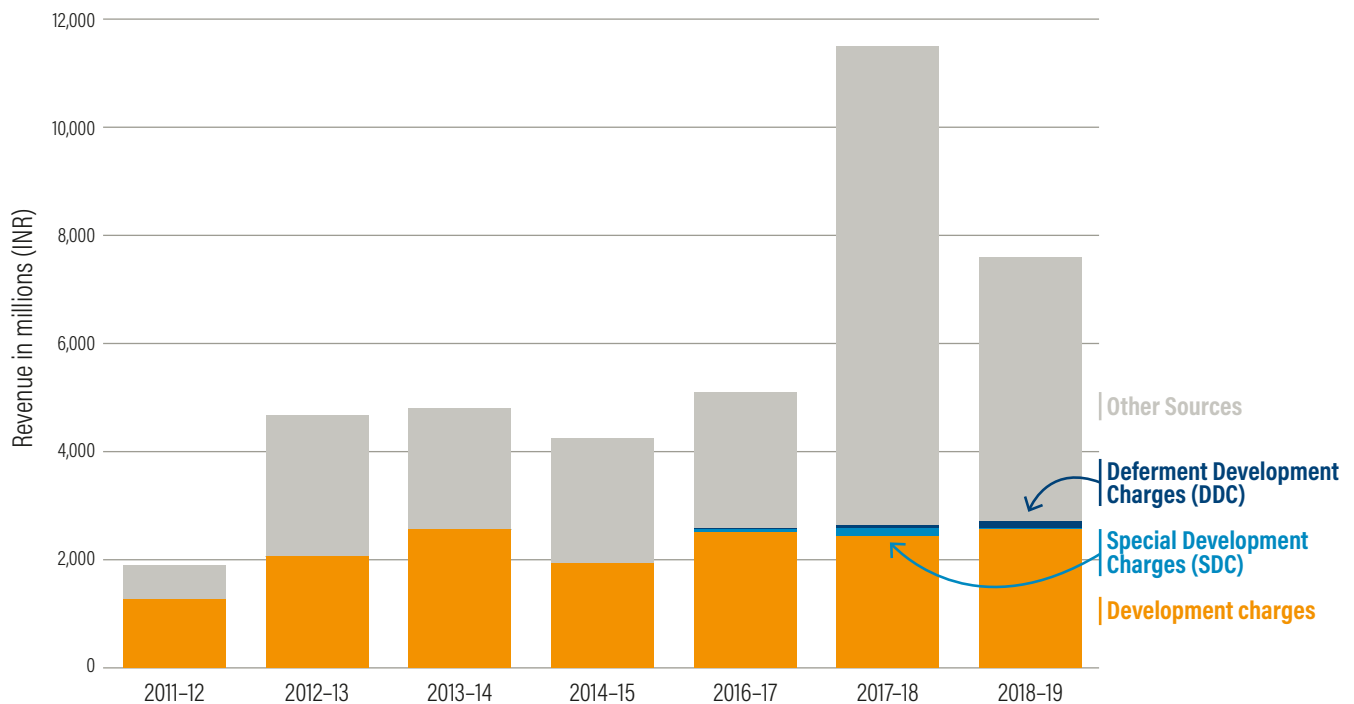


Figure 9.1: Sources of HMDA revenue 2011–2019

Results

No information is available about the total uplift in land value in the Outer Ring Road Growth Corridor (ORRGC). However, it is assumed that so far, land-based revenue raised through SDC is minimal, compared to its potential, with SDCs contributing only about 1.5% to overall HMDA revenues (figure 9.1). Revenue raised from DDCs is directed back to local villages and has become a major source of revenue for local government development projects (Mahendra et al., 2020). Potentially, ADPs were expected to be able to generate much larger revenues for HMDA. Within the ORR zone, ADPs were estimated to bring in a revenue of USD 14.33 billion¹⁵, about 100 times the total revenue of HMDA between 2017 and 2018 (MAUD, 2018). However, so far (as of June 2022) ADPs have not been implemented.

The construction of the ORR resulted in the displacement of more than 3,000 projected affected families, which were offered relocation packages. It is, however, beyond the scope of this case study to evaluate the fairness of these packages. It is unclear whether revenues raised from levying SDCs have been invested back in the region; DDC revenues have been directed back to local communities.

The potential of the ORR development project has so far not been distributed evenly over the region. Figure 9.2 shows that most of the growth around the ORRGC is concentrated around key interchanges and wealthier areas like the airport and financial district, while poorer areas in the corridor await basic infrastructure and services (Mahendra et al., 2020).

¹⁵ Conversion rate (2022): 1 USD = 79.88 INR

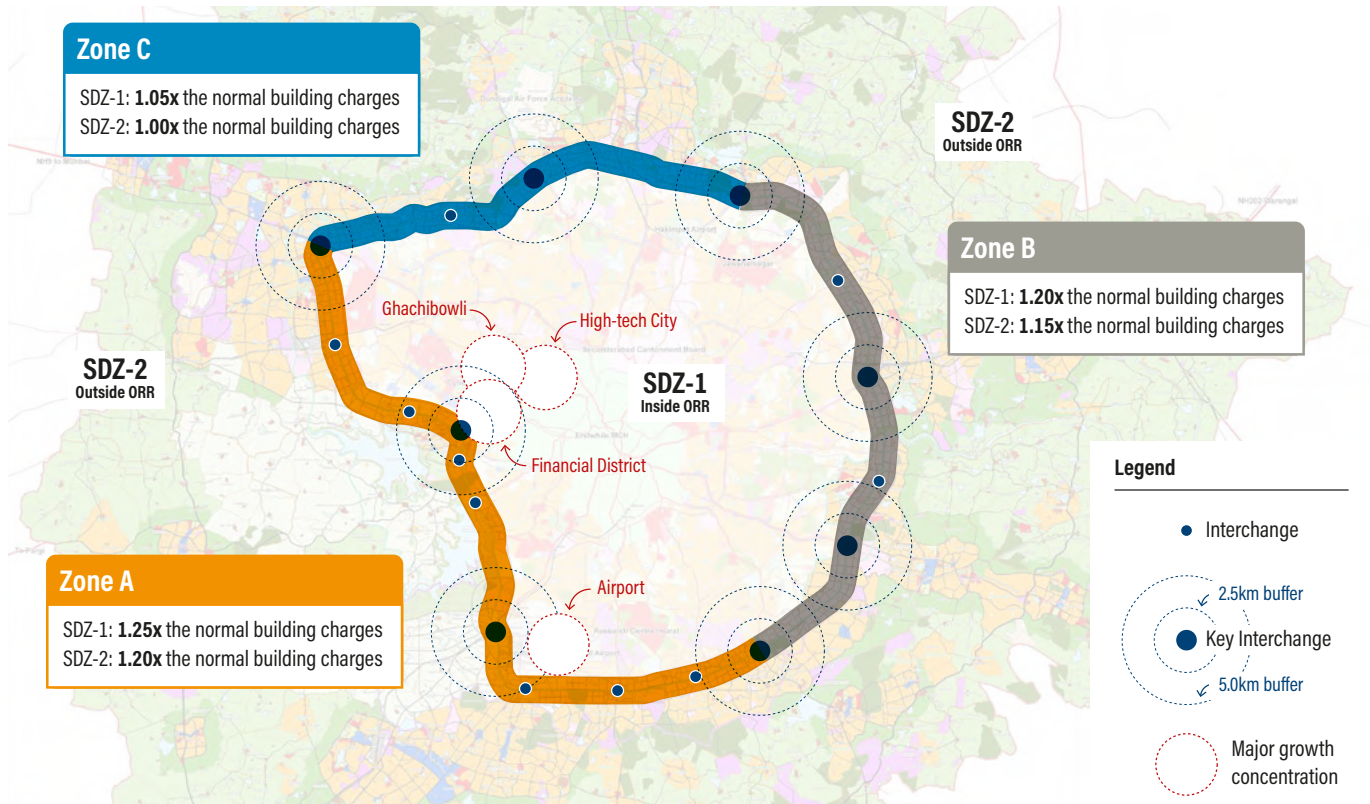


Figure 9.2: SDC Zones and Major Growth around ORRCG

Suitability of the chosen instrument for this particular case

With the implementation of the ORRCG, HMDA created both a broad vision and regulatory and administrative framework for development to take off outside of the inner-city area of Hyderabad. The ORRCG focused on large-scale, private development that would provide affordable housing, social infrastructure, and amenities. However, until now LVC mechanisms have not yet resulted in an improvement in access to services for most of the region's residents. Peripheral areas along the ORRCG await much-needed infrastructure such as roads, drainage, and sewage systems. Moreover, HMDA is not mandated to reinvest the SDC revenue back into the ORRCG region. Revenue raised from DDCs is directed back to local villages where the charges were collected. So, in principle, this type of LVC mechanism can be used by decision-makers at the local level to spend revenue on what they see as priority investments for their community (Mahendra et al., 2020).

Success factors, replicability/up-scalability

Effective government coordination, access to up-front financing for the road itself, administrative capacity to collect basic fees and taxes, and government support for LVC were key enabling factors for the fee-based LVC mechanisms to be implemented successfully. ADPs, however, require more coordination and are harder to implement (Mahendra et al., 2020), while apparently lack of political will and insufficient resources played a role in the postponement of the use of ADPs as well (Mahendra et al., 2020).



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10. Improving public revenues, Sao Paulo, Brazil

CONSTRUCTION RIGHTS GRANTS



General context

The Onerous Grant of Construction Rights or “OODC” (Outorga Onerosa do Direito de Construir) establishes an economic compensation to the public for density increments above the Basic Coefficient (BC) determined in zoning plans. A concept -relevant to BC- is Floor Area Ratio (FAR) which can be applied as a minimum or maximum coefficient for land-use intensity in a specific plot. This instrument is based on the idea that additional building rights defined above the BC do not belong to the individual owner. Instead, the mechanism proposes a division between building and land ownership rights. Thus, the additional building rights above the BC are considered a public asset (Smolka & Maleronka, 2018). Based on the public/private division of building rights, the concept of created land establishes that all citizens have the right to build within the basic FAR limits. However, those willing to build above the basic FAR or BC will be charged for the created land. This basic idea is crucial for the LVC Brazilian tradition because of its introduction as a political-juridical set basis for other LVC instruments.



Figure 10.1: Basic scheme of Basic/Maximum FAR

Motivation for using LVC instruments in this context

A feature that distinguishes OODC from other LVC instruments in Brazil is its scale. Whilst Urban Operations are introduced in a specific city perimeter, OODC works on a citywide level. This aspect is vital for city governments with high inequality levels since OODC essentially redistributes urban development from more affluent zones to the poorest areas. Thereby, the OODC experience demonstrates the success of tackling inequality issues by financing basic infrastructure from the urban development -or created land- generated in any part of the city.

LVC instruments setup and legal frameworks

According to Smolka (2013), the origins of this instrument can be found in Italy. In 1971, housing experts and members of the European Economic Commission (EEC) indicated that a division between property and building rights should be made. Additionally, only public authorities ought to grant the building permits, given that the building rights belong to the community (Furtado et al., 2006). Nevertheless, the most relevant foreign policy referent for the Brazilian OODC was developed in France (1975), with a new land policy reform that consolidated the idea of the BC. In Brazil, Sandroni (2022) underlines the precedent given by the Embu letter. This document resulted from a gathering of different professionals involved in urban development in 1976 to discuss how to address urban development issues concerning verticalization. Two concepts were essential to the discussion: “created land” (or “solo criado” in Portuguese) and “onerous grant” -both influenced directly OODC. What was drawn from these concepts discussed in the Embu letter was the acknowledgement that -for public authorities- it was the same charging for “creating land” as granting building rights to the landowners. Thus, the difference was that previously building rights were given for free, and now, they should be onerous.

The institutional basis of this instrument in Brazil is the City Statute (Brazilian Land Development Act), enacted in 2001. The Strategic Plan of 2002 sets the ground to guide the implementation for the city of Sao Paulo. Moreover, during the 1990s, instruments such as the Urban Operations helped creating the culture of paying charges in return for potential building rights among developers. Thus, political legitimacy had already developed before the instrument’s creation in 2001.

Results

Evidence about the instrument implementation shows that despite variable market cycles, the revenues obtained from the OODC application have increased considerably since 2004. Smolka and Maleronka (2018) argue that this “unearned” potential is probably caused by several reasons, such as un-updated land values, the application of discounts and exemptions, and the setting of the citywide flat basic FAR only from 2014 onwards¹⁶. A revision of the 2002 Master Plan was made that year, and it was established that a flat basic FAR of 1.0 would be applied to a range with a maximum FAR of 4.0, depending on zoning law. But this decision was not the only modification with relevant implications for the application of the instrument: with regard to the calculation of OODC charges, fiscal appraised property values were replaced by market values.

Figure 10.2 illustrates the revenues collected from the OODC implementation from 2004 until 2021. Regardless of the specific reasons that have influenced the income collection, trends show that from 2018 onwards, revenues have increased dramatically. After an initial sustained growth rate -from 2004 to 2011- comes a stagnation period until 2018, from where the revenues collected rise above any previous registration. The entire period draws a total income of USD 1.7 billion¹⁷. While comparing the first three months of 2022 with the same period in 2021, there is a 23% revenue increment in 2022.

¹⁶ Previously, between 2002 and 2004, a BC had already been defined for the city, but it was variable, not flat.

¹⁷ Average conversion rate (2004–2021): 1 USD = 2.85 BRL.

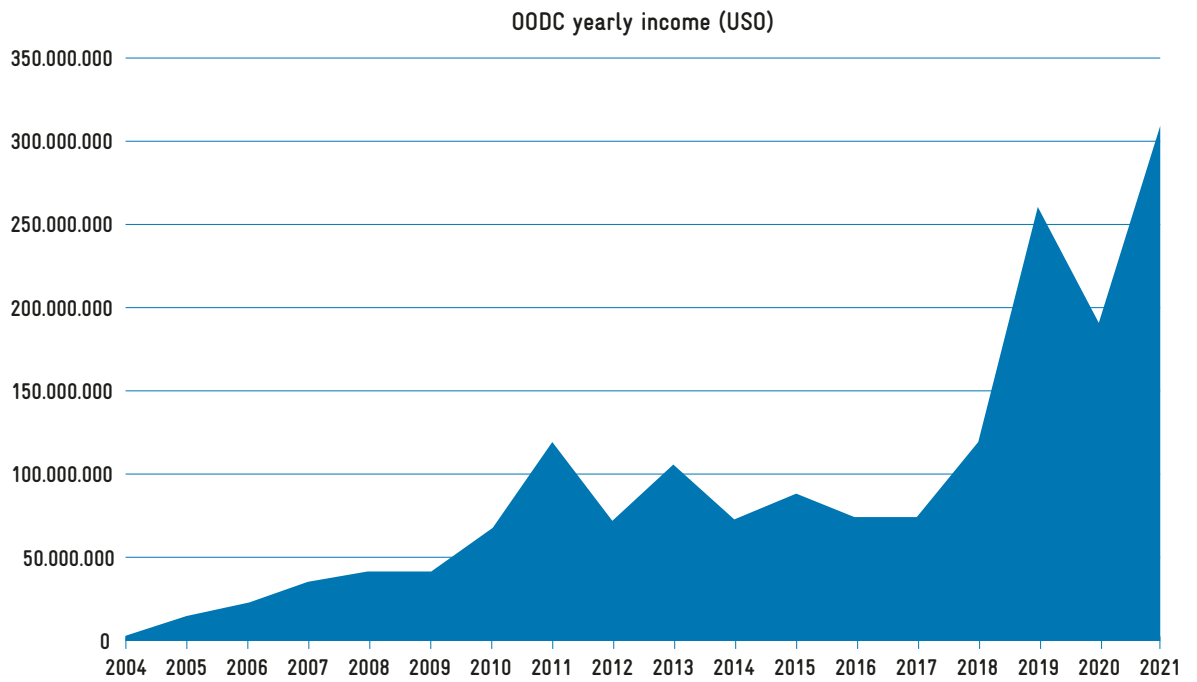


Figure 10.2: Yearly income for OODC between 2004 and 2021 (USD).

As far as the location of the projects that have contributed to the OODC collected revenues, figure 10.3 shows that developers and landowners build above BC in the entire city. However, in Sao Paulo's central areas a higher concentration of projects have made use of additional building rights.

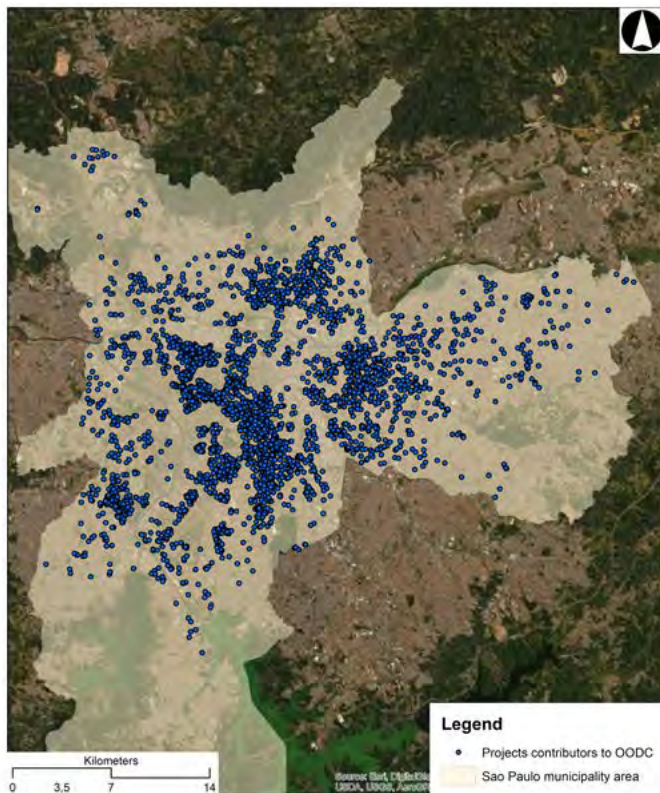


Figure 10.3: Location of projects contributors to OODC in Sao Paulo (2004–2021).

Suitability of the chosen instrument for this particular case

Critics of the instrument have indicated that one potential threat to its implementation is that it fosters urban density strongly and all the issues that may come with it. However, Maleronka & Furtado (2014) claim that it is not the OODC itself that increases densification, given that densification is already defined by the maximum use of urban regulations established in the zoning plans, e.g. maximum FAR limits. Thereby, Maleronka & Furtado (2014) underline that this reinforces the necessity for local governments of having updated land use plans.

Concerning the concept of “created land”, the additional land created above the BC is considered a public patrimony and “is not to be given away to favour one citizen above another” (Smolka, 2013). Hence, the fairness aspect is central in the instrument application. According to Maleronka & Furtado (2014), the instrument’s main objective is to neutralize the valuation gap derived from applying different land uses. Moreover, the instrument provides the opportunity to use revenues from high-density urban development -granted by land-use regulations- to fund social necessities in other under-developed areas of the city. In other words, this instrument’s aim has a subsidiary nature to redistribute the wealth in cities obtained from urban vertical growth.

Success factors, replicability/up-scalability

1. Simplicity. At least in the first stages of the instrument application, allowing for some time to consolidate before future steps that could be more complex, e.g., the charge could be applied progressively during a transition period from early to late stages of the implementation period.
2. Understanding that developers are not the natural enemies of the instrument and that it is crucial to have them as allies during the instrument implementation. The more developers decide to use the additional potential (or created land), the more legitimacy the instrument will gain.
3. Its application has to be permanent to all possible properties. A partial application is dangerous due to the risk of losing coherence in the instrument application while giving confusing signals to the market.



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Key informant: Fernanda Furtado

Annex: Shapefiles metadata¹⁸

Group	Urban legislation
Sub-group	Urban legislation
Layer name	Onerous grant
Description	New building/renovation approval processes with Onerous Grant of the Right to Build
Scale	1:1.000
Reference date	01-06-2019
Responsible	SMDU/DEUSO
Projection and datum system (consultation)	UTM/SIRGAS 2000
Projection and datum system (download vector or matrix file)	UTM/SIRGAS 2000 e UTM/SAD69
Update frequency	Quarterly
File type	Xls, Shapefile SAD69-96 e Shapefile Sirgas.
Availability	Map, download and Integration.
Mean	Intranet, Internet e WMS

¹⁸ Available in <http://geosampa.prefeitura.sp.gov.br/>

11. The one-hundred-years-old experience, Bogota, Colombia

BETTERMENT LEVIES



General context

A Betterment Levy can be described as a contribution system among landowners and the public sector destined to fund basic infrastructures such as roads and sewerage. The mechanism establishes that property owners of a selected area pay a fee or levy, which can be complemented -or not- by public resources. The levy can be charged before, during or after the infrastructure projects have been completed. In the case of Colombia, it is important to recognise that the instrument builds on a quite successful one-hundred-years tradition, characterized by considerable revenues captured by public authorities and high legitimacy from the population.

Motivation for using LVC instruments in this context

The budget scarcity of local governments is a significant issue in the majority of the cities of Colombia and the region. Thus, a successful instrument such as the case of Betterment Levy in Bogota is relevant for its contribution towards local government resources that help improve public space infrastructure.

LVC instruments setup and legal frameworks

The instrument has been present in a structure similar to the current one in Colombian legislation since 1921. Initial forms of the instrument can be found even at the beginning of the nineteenth century. Furthermore, in 1936 with the enacting of 195 Law -and structured generally in 1966 with the 1,604 Law Decree-, this instrument appeared as a national regulation with similar characteristics as the current structure (Smolka, 2013). This regulation enables cities to develop infrastructure financing mechanisms using special assessments. Later, in 1987, the city

of Bogota published the Valuation Statute (Agreement N°7). This regulation defined that valorisation externalities -due to the instrument's application- should measure all perceived benefits: mobility, land-uses, urban planning, quality of life, etc. (Borrero, 2014). The latter is a distinct difference from other BL models applied in Colombia, such as the one used in Medellin that focuses on the gap between property's land value valorisation with and without the infrastructure projects. Borrero (2013) states that other Betterment Levy models -Cali and Medellin- are more conventional according to Colombian Betterment Levy regulation, given that the law does not indicate that mobility aspects generate increases in land value. Recently, in 2016, the 1,819 national Law modified the instrument, granting for instance the taxing facility to the state, municipalities and districts, allowing them to finance any public interest project, particularly infrastructure projects (Montaña, 2021). According to Borrero (2014), all local models are legal within Colombian legislation but are different concerning Betterment Levy distribution methods and approaches.

According to the Colombian regulation, uplifts in property values involved in Betterment Levy implementation are one of the three parameters¹⁹ that set the total distributable amount of the instrument. Therefore, the case of Bogota shows that the LVC instrument can reinforce a virtuous cycle of higher uplifts in property values, by increasing the total amount of the specific Betterment Levy application. Furthermore, eventual risks related to increment in property values have been addressed by improving the model's methodologies concerning adjusting levies' quotas and the community's payment capacity.

¹⁹ According to Borrero (2014), BL in Colombia it is set by three parameters: (1) cost of construction, (2) properties valorisation made by the instrument introduction, (3) taxpayer capacity.

Three models of Betterment Levy in Colombia, according to Borrero (2014)

Medellin’s model applies BL by a “local benefit” approach

In comparison with Betterment Levy Bogota’s model, the essential difference is that this model is based on determining two factors: the property’s land value valorisation as a result of the infrastructure project and the payment capacity of the taxpayers. To tackle this, the Medellin model applies the double appraisal method by sampling. Applying this methodology sought to identify land value valorisation **with**-if the project is built and operating- and **without** the infrastructure project (using existing market appraisal databases).

According to Montaña (2021), this model design relates to the Participacion in Plusvalias (Land Value Capture Tax) instrument. The constitutional origin of this LVC instrument is founded in the 82 article of the Colombian Political Constitution, which grants that public entities will participate in land value capture gains generated by them and regulate the use of urban land and air in defence of the common interest. Moreover, in 1997, 388 Law developed this tribute by conceiving it as an instrument with extra-fiscal purposes in the service of urban planning.

Bogota’s model applies Betterment Levy by a “local benefit” approach.

Bogota’s model applies the Factors Benefit Method to identify the land value valorisation according to the distance to the infrastructure projects developed by Betterment Levy. The following figure shows how buffer areas around the infrastructure project are defined and the related property valorisation to determine the Betterment Levy fee for each property.

Benefit degree	Distance in meters	Valorisation %
1 st degree: maximum	1,000	15 to 25
2 nd degree: medium	2,000	10 to 15
3 rd degree: minor	3,000	5 to 10
4 th degree: minimal	5,000	5 or less

Table 11.1: Features of Bogota’s local benefit model.

Cali’s model applies a combined approach of “general benefits”.

The 241 Agreement enacted in 2008 establishes that this methodology grants the Betterment Levy application for funding 21 city infrastructure projects whose estimated cost as of August 2008 was USD 450 million. This Agreement also establishes several criteria to determine the BL fee measured in an algorithm. For instance, for residential properties, the criteria are: the property area, the relative general benefit, the overall benefit and the socioeconomic stratification factor to interpret the relative payment capacity by each stratum. Other criteria are defined for land uses such as industrial, commercial, institutional, plots and suburban properties, among other conditions. In order to set the urban benefits algorithm factors, studies were carried out to determine land value gaps with and without the development of infrastructure projects. In addition, a further study measured property valorisation, following Bogota’s model to calculate the local benefit of Betterment Levy projects.

Results

Table 11.2 shows data from Betterment Levy application in three different projects in Bogota from 1993 to 2016 -obtaining more than USD 1.6 billion in collected revenues.

Betterment Levies applied	Approval date	Levy application date	USD (TRM ²⁰)
General valorisation	1993	1993	USD 106,161,162 ²¹
	Subtotal		USD 106,161,162
“Formar ciudad” project	1995	1996–1998	USD 267,489,551 ²²
	2001	2002	USD 51,324,330 ²³
	Subtotal		USD 318,813,881
180 Agreement – 2005 (Levy applied for local valorisation)	2005	Phase I: 2007 and 2010	USD 305,259,980 ²⁴
		Phase II: 2012	USD 344,649,264 ²⁵
		Phase III: 2014	USD 305,551,084 ²⁶
		Phase IV: 2016	USD 65,373,093 ²⁷
		Subtotal	
451 Agreement – 2010 (“POZ ²⁸ Norte)	2012 Ring Road Levy		USD 222,495,397²⁹

Table 11.2: Betterment Levies features applied in Bogota.

Suitability of the chosen instrument for this particular case

One of the most relevant parameters to assess the instrument’s implementation is the taxpayer payment capacity. Thus, reaching an appropriate balance between a realistic community’s payment capacity and a fair levy contribution is a relevant challenge for the instrument design. To achieve a balanced levy for the community, the instrument’s design entails conditions such as that the economic contribution cannot exceed twice the property tax fee

-in addition, Betterment Levy can be paid in divided payments over two years. In other words, the more accurate the levy cost for the community -between the two mentioned factors- the more chances are of a high instrument success.

Concerning public participation, local regulations include processes of citizen legitimization of the Betterment Levy projects, in addition to the approval of the collection of the tax and the rules of distribution by the collegiate decision-making bodies. In this sense, the local regulations address establishing how to elect the community representatives, the rights and obligations of information, the process of determining the tax, the project’s execution, etc.

20 TRM represents the exchange rate of Colombian Pesos to USD (millions) at market value for each year’s period where the levy was applied.

21 Conversion rate (1993): 1 USD = 786.54 COP.

22 Conversion rate (1996 – 1998): 1 USD = 1201.06 COP

23 Conversion rate (2002): 1 USD = 2506.55 COP

24 Conversion rate (2007 and 2010): 1 USD = 1987.46 COP

25 Conversion rate (2012): 1 USD = 1797.79 COP

26 Conversion rate (2014): 1 USD = 2000.33 COP

27 Conversion rate (2016): 1 USD = 3050.98 COP

28 POZ or Plan de Ordenamiento Zonal del Norte correspond to the Bogota’s Northern Zone Land Management Plan.

29 Conversion rate (2012): 1 USD = 1797.79 COP

Success factors, replicability/up-scalability

1. (Levies) Cost-benefit relation: The instrument implementation must identify the impact of the betterments in the property prices and a fair contribution fee from the community for maintaining the legitimacy of the instrument (Borrero, 2014). If communities perceive that the Betterment Levy benefits do not correspond to the payment made, the collection rate -and thus the revenues- will start decreasing, as well as the confidence in the instrument's financial success that is based partly on the community contribution. It is essential to underline that Betterment Levy has a better acceptance for taxpayers than other taxes, such as the property tax because the cost-benefit relation is clearer.
2. Citizenship surveillance: the community must have participation in the process of defining the levy amount, the charging method and the project's process. According to Borrero (2014), in cities where this instrument has failed, it has been where revenues have been invested in other local government areas. Thus, one of the keys to this instrument's success in governance is having a strong mechanism that prevents the revenues collected from not ending in projects not related to Betterment Levy. Thereby, this challenge requires clear regulations and public authorities committed to the instrument implementation.
3. Political support: given the consolidated public legitimacy that the instrument has within the Colombian society due to the valorisation that betterments draw to properties, Borrero (2014) points out that poor communities address politicians directly demanding Betterment Levy projects in their neighbourhoods. The author states that some politicians also stimulate communities to develop Betterment Levy endeavours -especially for street paving projects. Thereby, politicians' support for Betterment Levy projects is vital for contributing to this instrument development.



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Magda Cristina Montaña Murillo

12. The Public Space Contribution law and the Local Governments role, Valdivia, Chile

DEVELOPER OBLIGATION



General context

In 2020, the city of Valdivia in the south of Chile was the first Local Government (LG) in the country in publishing the Communal Plan for Investments in Mobility and Public Space. This plan is part of the obligations made by the Public Space Contribution Law, enacted in 2016. The Communal Plan for Investments in Mobility and Public Space is an innovative tool - similar to so-called Developer Obligations - that connects the local government planning view with economic resources obtained from urban development. Initially created to cope with the traffic system externalities, the final design of the law addressed additional aspects that, regardless of fair critiques, crystalized a new systematic mechanism of Developers Obligations.

Motivation for using LVC instruments in this context

Chile has some experience with the use of LVC instruments. However, compared with other countries in South America, these applications haven't transformed into a solid LVC tradition yet. Hence, the experience with this type of Developer Obligations can contribute to the trust in this instrument as a strategic public space development tool. Considering this background, the success or failure of this LVC mechanism is relevant for the future of these kinds of urban policies.

LVC instruments setup and legal frameworks

In 2016, the Public Space Contributions Law (20,958 Law) was enacted in Chile. As a context, it is crucial to understand that the country has struggled with tackling the real estate externalities at neighbourhood level for several decades, especially with regard to the traffic system, due to the car fleet increase. A neighbourhood where high-rise buildings are being developed -with several parking lots- will lead to more cars on the streets, more pollution and

so on. These externalities caused by real estate developments were defined as “mitigations” in the Chilean urban planning system. In this context, the Public Space Contributions Law addressed this issue by defining two types of mitigations: direct and indirect. Direct mitigations focus on traffic impacts of developments in surrounding areas. Indirect mitigations oblige every municipality to create the Communal Plan for Investments in Mobility and Public Space (CPIPS) by developing a prioritized projects portfolio. This plan should also consider what is planned in land-use zoning plans in terms of building capacity.

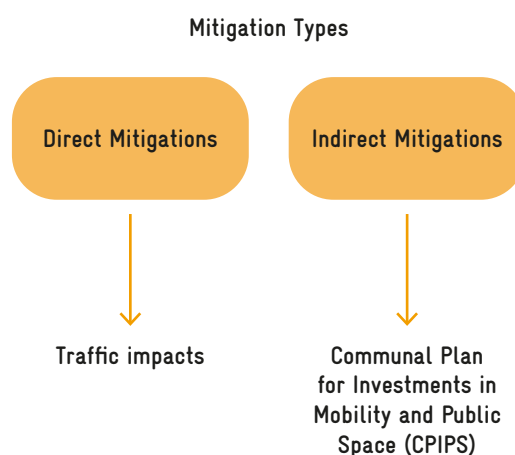


Figure 12.1: Mitigation types in Public Space Contribution Law.

Moving on, the law established specific conditions that must be fulfilled by all Local Governments (LG) and Regional Branches³⁰. Considering that CPIPS is part of the indirect mitigations, this case focus on the mentioned type of mitigation. According to Del Canto (2021), the main features of the indirect mitigations are the following:

1. From November 2020, the approval of every building permit process that increases densification contains the exact amount of fee payment (or square meters of the property) the landowner must transfer/cede to the LG. A formula is applied to decide the exact payment amount, depending on the project density degree. The contribution has a limit of 44% of the fiscal appraised property value (which does not correspond to the commercial value of the property – the latter is substantially higher).
2. Regional branches of the Housing and Urbanism Ministry are entitled to develop an Intercommunal/Metropolitan Plan for Investments in Mobility and Public Space. This plan can cover several LGs and demands that 40% of the revenues collected by LGs must be invested in projects that are part of the Plans' portfolio.
3. 70% of the annually collected revenues by LGs will have to be invested in projects related to Mobility Infrastructure³¹; the remaining 30% in Public Space³². These infrastructure projects can be localized in the entire LG area. The percentages for Mobility and Public Space projects are the same that for the Intercommunal/Metropolitan Plan for Investments in Mobility and Public Space.

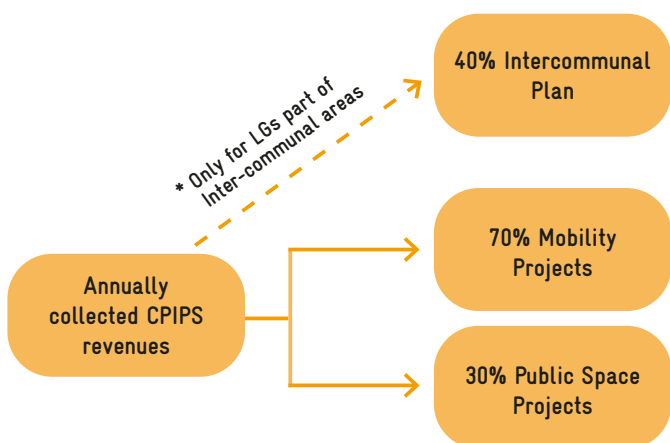


Figure 12.2: Collected revenues scheme with the Public Space Contribution Law.

30 In Chile there is a total of 16 Housing and Urbanism Ministry Regional Branches.

31 Mobility project examples: bike lanes, traffic lights, street improvement, etc.

32 Public Space project examples: parks and squares improvement and maintenance, and related.

Results

The Valdivia municipality was the first LG in the country that published the Plan for Investments in Mobility and Public Space in July 2020. The Plan contains 23 projects that relate with mobility infrastructure and six with public space. The type and localization of the projects can be found in figure 12.3.

Considering the recent application of collecting revenues process (November 2020), it is difficult to predict if the instrument will produce uplifts in property values. However, due to its local application, it is expected that the investment in public space and mobility will be more visible in LGs with higher land values and more intensive densification. It is therefore considered a policy that will particularly favour already more affluent areas of the city, while the impact on the poorest areas might be small (López-Morales, Sanhueza, Herrera et al., 2021).

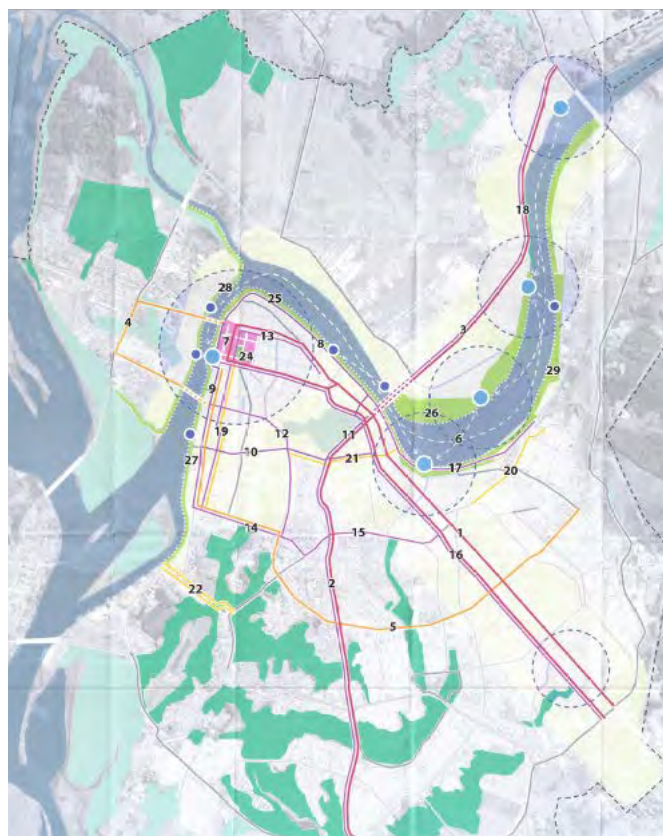


Figure 12.3: Valdivia's Communal Plan for Investments in Mobility and Public Space.

In 2021 nearly USD 2.6 million³³ was collected nationwide; with an LG average of USD 8,000, which does not add much yet to the funding of infrastructure and public space. Valdivia LG collected approximately USD 34,000. The Communal Plan for Investments in Mobility and Public Space must be updated at least once every ten years. In addition, it ought to be updated every time that the correspondent zoning plan has been updated.

LGs must decide if changes in planning regulations that allow for higher densification are desirable or not, if they aim to increase revenues from this instrument.

Suitability of the chosen instrument for this particular case

One of the potentials of this new law is that the instrument for the first time in Chile links planning and investment. Additional to the extra income that LGs can generate from applying the instrument, it requires LGs to develop plans for public space and mobility, bringing LGs in a better capacity to plan their territory in a sustainable way.

On the other hand, the implementation of the instrument so far has encountered several difficulties in the context of Chilean urban planning, including the fragmentation of decision-making processes (local against metropolitan level) and low revenues expectations in LGs with non-intensive developers' activity, particularly in rural areas.

Success factors, replicability/up-scalability

LGs still seem to lack sufficient managing capacities to deal with the complexities with regard to the implementation of the instrument. Studies show that lack of skilled officials in Chilean local governments is especially critical for urban development projects (Del Canto, 2021). To tackle this, capacity building within LGs is believed to be crucial for the successful future use of the instrument. In addition to that, regional coordination needs to be improved, in order to link local revenues from developer obligations to regional public infrastructure and other investment projects.



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Key informant: Magdalena Vicuña

³³ Conversion rate (2021) 1 USD = 760,36 CLP.

13. Non-negotiable and negotiable – High-rise building development, Surabaya, Indonesia



DEVELOPER OBLIGATION

General context

As many other Indonesian cities Surabaya city, located in the northeast of Java island, has seen both a high population and high economic growth in recent years. Together with strong increases in property prices, this has affected the demand for high-rise buildings in the city, with more than 40 currently under construction and plans for another 40+ projects. In order to control the planning of these projects and to guarantee sustainable development, with proper infrastructure and public services, the municipality of Surabaya has initiated a process to update the detailed master plan for the development of Surabaya. In line with that, the municipality has implemented new regulations for negotiable developer obligations, in addition to existing non-negotiable developer obligations, in connection to high-rise building development in designated areas (Pamungkas & Samsura, 2019).

Motivation for using LVC instruments in this context

Surabaya municipality makes use of a range of taxes and retributions that can be charged to private developers in different stages of the development process (table 13.1). Both the SKRK and the IMB retribution can be considered as typical non-negotiable developer obligations in exchange for a planning decision or the issuing of a building permit.³⁴ The SKRK retribution covers the fee to produce the maps related to the city land-use plan (however, in 2018 it was decided to abandon this fee). The size of the IMB retribution is specified in Municipal Regulation no. 12/2012. The retribution that has to be paid by a developer to receive an IMB varies from USD 14 to USD 70.³⁵

To increase land-based revenues from developer obligations and to benefit from the increased demand for high-rise buildings, the municipality of Surabaya introduced additional negotiable developer obligations, in connection to high-rise building developments.

NO	Stage of Development	Types of revenue source	Government regulation
1.	Pre-Construction	SKRK retribution	Municipal Regulation no.5/2012.
		IMB retribution	Municipal Regulation no.12/2012.
2.	Construction	Advertising tax	Mayoral Regulation no.14/2009.
		Land and building tax	Municipal Regulation no.10/2010.
		Hotel tax	Municipal Regulation no.4/2011.
		Restaurant tax	Municipal Regulation no.4/2011.
3.	Operational	Street lighting tax	Municipal Regulation no.4/2011.
		Acquisition tax (BPHTB)	Law no.20/2000
		Advertising tax	Mayoral Regulation no.14/2009.
		Waste retribution	Municipal Regulation no.10/2012.

Table 13.1: Surabaya Municipality: developer obligations related to property development

³⁴ SKRK retribution: fee to obtain pre-construction permit – Surat Keterangan Rencana Kota; IMB retribution: fee to obtain development permit – Ijin Mendirikan Bangunan

³⁵ Conversion rate (2019): 1 USD = 15,000 Indonesian Rupiah

LVC instruments setup and legal framework

Apart from the non-negotiable SKRK and IMB contributions, municipalities in Indonesia can negotiate an additional (in-kind) contribution, as part of the granting of the development permit (IMB). The city of Surabaya has specified this contribution in the Mayoral Regulation no. 75/2012, stating that such an additional contribution can be required conditional to granting the IMB, particularly when a specific infrastructure or utility required in the related SKRK is still not available. The regulation specifies the contribution as a proportion of the land that will be used for public infrastructure. The proportion, ranging from 20 to 41% of the total area, depends on the type and size of the proposed development. Although the regulation stipulates the exact amount of land to be provided, the specific public infrastructure that must be provided can still be subject to negotiation (Pamungkas & Samsura, 2019).

Results

The revenues that can be expected from the existing non-negotiable retribution related to the SKRK and granting the IMB are limited. However, the introduction of negotiable developer obligations (additional to granting IMB) makes it possible for the municipality to substantially increase its land-based revenues. In 2016 the municipality of Surabaya commissioned a study to estimate the potential revenue that can be captured by LVC mechanisms, particularly from allowing and permitting high-rise buildings until 2021, based on the 40+ proposals that had already been submitted until 2016 and that were awaiting approval. The study assumed two scenarios, based on respectively a decline in the number of proposals and a more optimistic view of stable continued growth of the number of proposals. Based on these scenarios and the LVC instruments that the municipality has at its disposal, total revenues for the municipality in the pessimistic scenario were estimated at USD 190 million and in the optimistic scenario at USD 230 million.

Suitability of the chosen instrument for this particular case

While the high demand for high-rise buildings offered opportunities to increase municipal revenue from LVC, there was also concern about the negative spatial impact of further uncontrolled high-rise development since the current masterplan was out of date. The introduction of negotiable developer obligations for high-rise building development was therefore combined with the start of a process to update the masterplan for Surabaya. Additionally, the mayor of Surabaya released in 2015 Mayor Regulation no. 57 to accommodate and control high-rise building investments in a more sustainable way, prior to the approval of a new masterplan (Pamungkas & Samsura, 2019). By introducing stricter planning control with regard to the development of high-rise buildings, the city of Surabaya actually increased the attractiveness for investors to develop those high-rise buildings that were still allowed. In turn, this allowed the city to negotiate higher developer contributions.

Success factors, replicability/up-scalability

The introduction of negotiable developer obligations in connection with promoting high-rise building development in Surabaya potentially can be quite successful. Three factors seem to be the basis for this success:

- The municipality has been updating its masterplan, offering both a legal basis for promoting sustainable future high-rise building development and transparency for private developers which locations may offer them development opportunities;
- By commissioning a study to estimate the potential land-based revenue that can be generated from developer obligations in connection with high-rise building developments, the municipality has increased awareness of the potential of LVC;
- A smart relation, via the granting of the IMB, has been established between existing non-negotiable developer obligations and the introduction of additional negotiable developer obligations. Moreover, guidelines have been published that specify the contribution as a proportion of the land that will be used for public infrastructure facilities.

The developer obligations have already resulted in the implementation of several infrastructure projects, fully funded through contributions by developer companies. With regard to high-rise building developments, developers have been asked contributions to upgrading surrounding areas, infrastructure and public transport, facilities for disabled people and green building development. However, the introduction of developer obligations has also led to strong debate. Private developers have complained about its impact on corporate costs and competitive disadvantages. Consequently, the municipality must now ensure that the contributions by developers will be used solely for on-site facilities, adding to the quality of the location and the commercial value of the high-rise building project, so that the developers can share the benefits of their own contributions (Pamungkas & Samsura, 2019).



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14. Financing of large public infrastructure, Purmerend, The Netherlands

NEGOTIATED DEVELOPER OBLIGATION



General context

The municipality of Purmerend, a small town located North of Amsterdam (as part of the Amsterdam Metropolitan Region), plans to invest in public road and green infrastructures, in order to increase both accessibility and livability of various parts of the town. To finance these public works, the municipality makes use of negotiated developer obligations, to be paid by all private developers involved in residential development projects. In addition to that, Purmerend wants to increase affordable housing, by requiring a minimum share of social housing in new development projects by private developers. Since in certain development projects adding social housing would put pressure at the financial feasibility of the project, private developers may pay instead, as a compensation for not including social housing in their plan, another developer obligation to the municipality that will be used for social housing elsewhere in Purmerend.

Motivation for using LVC instruments in this context

Purmerend lacked sufficient resources for funding of critical large public infrastructure projects. Negotiated developer obligations are therefore used as gap funding, based on the argument that the whole city, including new development projects, will benefit from these investments.

LVC instruments setup and legal framework

The Afdeling Grondexploitatie in the Dutch planning law provides the legal basis for municipal land policy, including public land value capture. This legal framework contains a ‘toolbox’ with instruments that support both active and passive land policy by municipalities. With active land policy municipalities acquire all land that is needed for the intended development project, service that land and put in the infrastructure, and then sell building plots

to private developers and end users. The net income from buying and selling land is intended to cover all public infrastructure costs. With passive land policy, municipalities facilitate private developer initiatives for new developments by changing the land use plan (provided that the initiative fits with a municipal masterplan) and will require both a contribution from the developer that covers all of the on-site public infrastructure costs and a (proportional) contribution from the developer to off-site public infrastructure costs that are necessary, because of the intended development project. Additionally, municipalities can require a developer contribution to large public infrastructure works without a direct connection to the project.

In principle, all developer contributions are negotiated and come voluntarily. However, in case the municipality and the developer do not reach an agreement with regard to either the on-site public infrastructure costs or the off-site public infrastructure costs with a direct link to the project (which is rare), a non-negotiated developer obligation, embedded into the exploitatieplan (the ‘development contributions plan’) will be charged. There is detailed regulation with regard to (the size of) the costs that can be included in the exploitatieplan. With regard to developer contributions to not-directly-related large public infrastructure, there is no such legal fall-back option to a non-negotiated contribution. The latter contributions are only ‘negotiable’.

Results

If municipalities want to charge developers to contribute to large public infrastructure projects, they must motivate how the city will benefit from these infrastructure projects. Purmerend has specified these projects and related costs in great detail in a vision document, including projects that will contribute to both car, public transport and cycling accessibility, parking facilities, investments in public recreation areas, and investments in social housing units.

Between 2012 and 2020 Purmerend received in total approximately USD 900,000³⁶, based on these developer obligations for large public infrastructure. The larger part of this sum was used for funding of a public parking garage. The total amount of developer obligations received for on-site public infrastructure and off-site public infrastructure with a direct link to the project is unknown, but is likely to be much more than that.

Suitability of the chosen instrument for this particular case

To secure private developers' contributions to large public infrastructure, Dutch cities can make use of the instrument of negotiated developer obligations. The size of the developer obligations - both for off-site large infrastructure (without a direct connection to the plan) and the compensation paid for leaving out social housing in the plan - is negotiated between the municipality and the developer and, after they reach an agreement, settled in a development agreement (a contract, based on private law).

The municipality of Purmerend has specified these large public infrastructure works, including a motivation why they are required and an explanation of the total expected public investments, in a vision document, and refers to this vision document when negotiating developer contributions to these large infrastructure costs.

Success factors, replicability/up-scalability

If Dutch municipalities want to charge negotiated developer obligations for funding of large public infrastructure that is not directly connected to the plan (but that still benefit a development project indirectly), they are required to publish a vision document in which they specify the large public infrastructure works. While it can be expected that new development projects indirectly benefit from these investments (for instance, the overall accessibility of the city will improve), municipalities do not have to provide evidence of how exactly a certain development project benefits. Referring to the vision document, municipalities are free to define the size of required contribution. Since this is a negotiated developer obligation, developers can refuse to pay the contribution or negotiate a smaller contribution, arguing that limitations to the financial feasibility of their project do not allow them to contribute the requested amount of money. Municipalities might then in turn refuse or postpone issuing a new land use plan (that in most cases will be required to allow the proposed development).

The following success factors can be identified:

- The two-step process, consisting of negotiating a developer obligation in the first step and, if no agreement has been reached, charging a non-negotiable developer obligation in the second step, creates flexibility for municipalities when negotiating with private developers, while they can still rely on a legal back-up.

- In case, as part of the second step, a non-negotiable developer obligation is charged, municipalities must still provide proof of how the public infrastructure for which the developer obligation is used relates to the particular development project. This prevents municipalities to charge developer obligations that would not benefit the private developer at all.
- The requirement for municipalities to publish a vision document in which the off-site infrastructure projects are specified offers transparency to private developers how their contributions will be used.
- The regulation for developer obligations defines a maximum to the developer obligations: the size should never result in a financial loss for the developer, when developing the project.

At the same time, the system is still not without problems (Hendricks et al., 2021). Private developers, on the one hand, often complain about the lack of transparency in this process – particularly regarding the size of the developer obligations. Municipalities, on the other hand, lack information about the feasibility of the developer projects and find it difficult to judge the developers' claims that they are not in the position to contribute.

Replication of the LVC mechanism in other countries may be considered. However, the mechanism requires sufficient institutional capacity, particularly to calculate the size of the developer obligations that can be charged, based on both a detailed financial impact assessment of the development project on the one hand and a detailed calculation of the (off-site) infrastructure costs.



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³⁶ Conversion rate (2020): 1 USD = 0.81 Euro

15. The case of Miraflores, Lima City, Peru

TRANSFER OF DEVELOPMENT RIGHTS



General context

The Municipality of Miraflores in Lima, Peru introduced in 2012 a programme of the restoration and conservation of old houses that are considered as landmarks of the city, funded by revenues from the transfer of development rights. What was behind the introduction of the transfer of development rights (TDR) programme was the fact that the private owners of these landmarks lacked sufficient funding to bear the cost of the restoration or conservation of their properties. As a solution, the Municipality of Miraflores issued certificates of development rights, recognizing that the owners of the landmarks would have the right to build on their properties until a certain height, if the properties were not considered landmarks by the government. Since the properties actually were considered landmarks, the owners receive as a compensation for the restriction, certificates of transferable development rights. The certificates allow the owners to build in certain corridors of the city higher than the height limits usually set for those areas. The corridors that will receive the increased development are called the receiving corridors (*eyes receptores*). The mechanism is based on the fact that the receiving corridors already have sufficient infrastructure and physical characteristics to host such increases in density. The certificates are designed as a transferable title, allowing the holders of the certificates either to use them in properties of their own, located in one of the receiving corridors, or to sell them to developers who own properties in the receiving corridors that are interested to make use of the air rights (Fernandez, 2019).

Motivation for using LVC instrument in this context

The introduction of TDR in Peru is primarily financially motivated. By offering TDR to landmark property owners, as a compensation for the fact that they cannot use their air rights, the owners will have additional funding for restoration and conservation of their properties.

LVC instruments setup and legal framework

Most of the LVC tools have been introduced in Peru quite recently, since around 2010. For instance, the Regulation for Territorial Planning and Urban Development, which introduced land readjustment regulation, was published in 2011. In 2012, the municipality of Miraflores issued the Municipal Ordinance 387-MM with regard to TDR. Based on this experience, in 2014 the Metropolitan Municipality of Lima (MML) approved the Municipal Ordinance 1862-MML, which introduced the TDR mechanism and land restructuring for the city as a whole. Additionally, the Municipal Ordinance 1869-MML regulates the TDRs and establishes that the MML is the only entity that rules how TDR works (Article 2) (GIZ, 2021).

At the national level, in 2016 the Regulation for Territorial Planning and Sustainable Urban Development (RATDUS) was approved. This document is a milestone for the LVC tools because it introduced the TDR mechanism and additional development rights for sustainable building and inclusionary housing. Likewise, in 2019 the Ministry of Culture introduced a pilot project about TDRs. By the implementation of this instrument named “*Altura para la Cultura*”, the owners of cultural heritage can sell to developers with housing projects the square meters that they cannot develop as a result of the height restrictions imposed by their heritage status (GIZ, 2021).

Alternative LVC tools that are available to municipalities include (GIZ, 2021):

- Betterment contributions;
- Land readjustment and development exactions;
- Floor bonification for sustainable buildings and inclusionary housing.

Results

Fernandez (2019) reports that, after the implementation of the mechanism, only eight owners of landmark properties made use of the possibility to obtain TDR certificates (data from 2019).

Despite the limited ‘appetite’ by the owners of landmark properties in Miraflores so far, the Metropolitan Municipality nevertheless made the TDR mechanism available to Lima City as a whole (2015), followed by the introduction of TDR as an instrument for urban finance at a national scale in RATDUS (2016). More recently, the Ministry of Culture has developed a national-scale programme for the restoration and conservation of properties with cultural value through the TDR model.

Suitability of the chosen instrument for this particular case

To allow the use of transferable development rights, as a compensation and funding mechanism for the owners of the landmark properties it is necessary, first to define what is meant by ‘landmark properties’ and, second, to introduce height limits to landmark properties.

The landmark properties refer to houses that can be considered as cultural heritage, or houses with a typology that is characteristic of the neighbourhood. As explained by Fernandez (2019), the exact definition of the intervened areas established in the Ordinance is: “Areas identified in this Ordinance with buildings with predominantly homogeneous characteristics in the treatment of their facades, volume, urban profile, typology and/or architectonic style, declared or not by the Ministry of Culture as cultural properties, that are part of spaces or sub-spaces organized by corridors, with a value of group visible from the public space and that have a special regime of conservation and development, according to the established in this ordinance” (Article 3.1 of the Ordinance).

The height limits are usually the responsibility of the Metropolitan Municipality of Lima. However, the Municipality of Miraflores found a way to “by pass” this authority. According to the interpretation of the Municipality of Miraflores, Ordinance 920 of the Metropolitan Municipality of Lima authorized Miraflores to establish special building conditions for properties in front of parks, avenues, and on corners. Since the so-called “receiving corridors” of the TDR are located in front of avenues, Miraflores would be authorized to regulate this matter under this interpretation (Fernandez, 2019)

Success factors, replicability/up-scalability

The success of TDR programmes, in general, depends upon the creation of a functioning marketplace, with buyers, sellers and intermediaries that refer buyers to sellers. Though TDR programmes can be attractive since they offer in fact “free money” to invest in societal goals, the introduction of such programmes is not without problems. When introducing a TDR programme, as a typical cap and trade system, the government is responsible for the maximum amount of rights that can be traded. To define the maximum amount of transferable rights in cases like this, at least three issues must be considered. First, the government should define how much funding is required as an incentive for the property owners in the sending area to invest in the restoration and conservation of their properties. Second, the government must define, from a planning perspective, how much additional air rights can be allowed in the receiving area. Third, the government needs to assess the market demand for air rights in the receiving area, in order to calculate the potential revenues for the landmark property owners from selling their air rights. What must be taken into account is that market demand may fluctuate, which can have a huge impact on the market value of the transferable rights and consequently the amount of the revenues to the certificate holders from selling the certificates. To be able to answer these questions, market transparency is crucial. However, in Peru there is no National Cadaster. Instead, municipalities must have their own municipal cadaster. GIZ (2021) mentions that the up-to-datedness, accuracy and completeness of the local cadaster records is still problematic. Moreover, if (local) governments consider to introduce such programmes, they must have the institutional capacity to manage the programme. Again, according to GIZ (2021), this might still be a bottleneck in the execution of the TDR programme (and other LVC tools as well).



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16. The case of Marmara Forum Complex, Istanbul, Türkiye

NEGOTIATED DEVELOPER OBLIGATIONS



General context

As a response to the inflexibility of the legal planning framework for development projects, the use of negotiated developer obligations, based on agreements between local governments and private developers settled in private law, has become more and more common in large urban development projects in Türkiye. In the Marmara Forum Complex development project (figure 16.1), such negotiated developer obligations have been used, first in an agreement about the provision of additional infrastructure in a later stage of the development and, second to settle the legitimization of some parts of the project that appeared to be not in line with the original plan and the building permit (Turk and Gumru, 2019).

Motivation for using LVC instruments in this context

As an alternative to existing non-negotiated development obligations (N-NDOs), based on the Reconstruction Law, Turkish cities have started from the beginning of this century – to deal

with a substantial increase of large urban transformation projects – with using negotiated development obligations (NDOs) based on agreements with private developers, settled in private law. Figure 16.2 provides an overview of how developer obligations were charged in relation to the Marmara Forum Complex. In the Marmara Forum project, two types of NDO-based agreements were used to solve issues that actually had come up after the grand opening of the project in 2011. After the issued building permit had been declared unjustified and the occupancy permit had been cancelled, the municipality and the investor started to negotiate a solution out of the legal problem that had arisen. The municipality required a ‘financial compensation’ from the investor, conditional to legalization of the project. First, an NDO agreement was used for the purpose of the mitigation of negative impacts on local infrastructure caused by the project. And a second NDO was agreed in fact to compensate for the legalization of some parts of the project that were judged in court as illegal (Turk and Gumru, 2019).



Figure 16.1: Marmara Forum Complex

The site was under treasury ownership







1954		Passing of the site to private ownership
1996		Partial sale to CarrefourSA Land use change to business centre and trade
2003		Approval of the local land use plan (IMM)
2004		Approval of the detailed local plan (BDM) Agreement between CarrefourSA and the IMM Approval of the preliminary project and the construction permit
2006		Amendment of the plan and the construction permit
2008		Sale of the complex to Multi Development (while under construction)
2011		Grand opening of the Marmara Forum Cancellation of the construction permit issued for Marmara Forum (IMM)
2012		Approval of the demolition of the complex (IMM Council) Cancellation of the occupancy permit (IMM) Multi Turkey filed a lawsuit for the cancellation of the destruction order (the case concluded with a verdict against Multi Turkey)
2015		Multi Turkey approached the IMM with a draft agreement
2016		Settlement of parties on the developer's obligation Approval of the amended local spatial plan for Marmara Forum (IMM)
2017		BDM filed a lawsuit against the plans

Figure 16.2: The process of NDO in the Marmara Forum Complex

LVC instruments setup and legal framework

Based on public law (Reconstruction Law), new development projects either were initiated by municipalities making use of a Land Readjustment scheme or were initiated by private developers (“voluntary method”). As a third option, public development based on expropriation of the original landowners is available to municipalities. The “voluntary method”, as the most popular one of these strategies, relates to Articles 15 and 16 in the Reconstruction Law and allows private developers a building permission, if the initiative fits with the local spatial plan. Conditional to the building permission is a requirement to cede a maximum of 40% of their land for public purposes (social and technical infrastructure).

Non-negotiated developer obligations are based on the Reconstruction Law. However, negotiated developer obligations have no legal basis in the Turkish planning system. They lie therefore within the realm of private law and are based on private-law contracts between local governments and private developers (Turk and Gumru, 2019).

What is behind the introduction of NDOs is primarily the wish from local governments to increase flexibility in the planning system. By introducing private-law NDO agreements they could “work around” the (inflexible) local land use plans, by adding “plan notes” as amendments to the original plan that allow private developers to develop their plans in line with the plan note (but not with the original plan), while at the same time securing that these developers cede a considerable percentage of their land for public purposes and provide the social and technical infrastructure. However, since there were still legal issues with the use of these plan notes (Turk and Gumru, 2019), the framework of NDO agreements has been further extended and has become widespread now.

Results

The exact revenues of the negotiated developer obligations in the Marmara Forum Complex are unknown, since they are provided in-kind by the developer. In general, local governments require that private developers cede 40% of their land for public purposes.

Suitability of the chosen instrument for this particular case

The primary goal of the use of NDOs is to make sure that private developers cede part of the development land, so that it can be used for the provision of both on-site infrastructure and off-site infrastructure in the vicinity of the development project and/or financial contributions to the construction of social and technical infrastructure. In the Marmara Forum project, a first NDO agreement was used to make the developer provide all necessary infrastructures, adding to sustainable urban development.

The second NDO agreement, however, had nothing to do with sustainable urban development, but was merely required from the developer as a compensation for resolving a legal problem (the project was declared illegal in court and the local government threatened to demolish the whole complex). In turn for legalizing the project, the developer agreed to donate to the local government a newly developed office block, a plot of development land and parking spaces.

Success factors, replicability/up-scalability

In the end, the two NDO agreements offered a way out of what had become a very difficult situation. The agreements, in return for the legalization of the project, actually prevented the demolition of the investment project, immediately after the grand opening of the project. In public discussions about the NDO in return for the legalization of the project (after the project was declared illegal), some have commented, however, that by such agreements the local government supports legalizing the illegal and that such an approach can pave the way to legalize other illegal buildings as well (Turk and Gumru, 2019).

Turk and Gumru (2019) critically address the dichotomy between the planning legislation and practice in Türkiye. With the construction boom in the 2000s, authorities have started to use NDOs, to bypass the rigidity of the current planning system.



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Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices
Bonn and Eschborn

Friedrich-Ebert-Allee 32+36
53113 Bonn, Germany
T +49 228 44 60-0
F +49 228 44 60-17 66

Dag-Hammarskjöld-Weg 1-5
65760 Eschborn, Germany
T +49 61 96 79-0
F +49 61 96 79-11 15

E info@giz.de
I www.giz.de

On behalf of



Federal Ministry
for Economic Cooperation
and Development