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LAND MARKETS AND LAND POLICY IN LATIN AMERICA AND THE CARIBBEAN

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1. Introduction

Walking through any of the great Latin American great metropolitan areas, one can see that wealth and opportunities coexist with neighborhoods lacking infrastructure services and with traffic congestion, environmental deterioration, poverty, and inequality. Moreover, in most cities, lack of access to *serviced* land is likely to be the single most critical factor explaining why one in five inhabitants of Latin America and the Caribbean resides today in informal settlements, with all their negative impacts on health, social mobility, and survival rates (ECLAC, 2021). Land policies are of paramount importance in every city. Not only are they a key component leading to sustainable urban development, but they're also inextricably associated with desirable social outcomes, including the increase of equal access to opportunities within the city and the reduction of poverty and inequality. They also play an important role in addressing one of the often-overlooked challenges of climate change: the fact that most economically disadvantaged groups are also the most likely to settle in high-risk areas most vulnerable to disasters. Even today, in the midst of the current digital revolution, in which advanced communications technologies are redefining social and economic activities (i.e., working from home or e-commerce disrupting retail), demands for *location* and *space*, the central elements of land markets, reaffirm even more the relevance of land polices and land instruments in support of building an inclusive society.

So why are land policies so relevant for the region? In Latin American cities, one-third of the population cannot access a dwelling on the formal land market. Affordable land is often available only in fringe areas where commuting costs are high; there is no infrastructure, or urban services are in deficient condition; and construction is risky due to legal or environmental conditions. Land costs added to the present value of transportation spent over time from living on the urban periphery often imply higher housing values for this group.

The availability of urban and serviced land depends, to a large extent, on public investments (transportation, utilities, etc.), and land prices are cumulative with respect to such conditions.

However, governments seeking to improve the economic base of cities many times concentrate public investments in infrastructure and services in specific areas that are attractive to businesses and highly qualified labor. The expectation that land may be zoned for future urban uses or redevelopment can generate substantial land price hikes, even before any public investments start. Many examples from cities in the region such as, in the 1970s, the opening of the Barra da Tijuca neighborhood in Rio de Janeiro, or Puerto Madero Project in Buenos Aires, illustrate the impact of

selective investment on land value increments. In all of them, publicly funded investments—such as the provision of infrastructure services—increase the value of land and property, as do planning and land use regulations defining zoning and construction potentiality in each plot in the city. Indeed, as a product of the increased capacity of high-income groups to pay the high prices of land in these privileged areas, a pattern of segregation may arise, with public works distributed accordingly.

There must be other ways, too. These conventional policies largely neglect the fact that the costs of providing urban infrastructure and services are public, but their benefits are private. Cities and municipalities have a largely untapped source of revenue: land. Land-based finance tools integrate urban regulatory and fiscal dimensions to optimize public spending in cities by generating owned resources at the local level and financing tools that can affect urban development patterns (Blanco, Fretes, & Muñoz, 2016).

Both the theoretical perspective and the findings of several case studies are adding support to the implementation of several land-based finance tools (LBFTs), which, through adequate land management, can correct for land-market dysfunctionalities. However, several issues hidden in their adoption have fueled resistance not only in Latin America but in cities all over the world. Among those, the effects on delaying or accelerating development timing and, thus, not been neutral in land markets (Rose, 1973, 1976) or passing on of the charge from landowners to final land users (Evans, 1983). Regardless of these limitations, many cities in Brazil and Colombia are implementing value capture strategies, followed by others in Argentina, Chile, Ecuador, El Salvador, and Bolivia.

In a context full of controversies, the aim of this chapter is to focus on the central role of land use regulation and land policies as a city's effective means of creating a wide range of opportunities for all population groups and to mitigate the enormous inequality in the use of land, land access conditions, infrastructure, and public services. As will be seen in these pages, land use planning and regulation of land markets provide the legal framework that determines the location of firms and residences in the urban space and, therefore, the distance between available jobs and potential workers. Access to opportunities also depends on the availability of infrastructure and affordable land and housing, which is achieved by creating land market conditions that favor the supply of well-located serviced and affordable land (and housing), especially for the poorest families. As a first step towards a greater understanding of these matters on whether and how land-use regulations and land polices affect land markets in the cities of Latin America, the following section provides a brief review of land markets and land polices and their relevance in Latin America. Section 3 describes the innovative ways in which land-based finance is used in the cities of the region, while Section 4 analyzes the evidence on the effects of the implementation of such tools. Finally, Section 5 discusses conclusions and the challenges ahead.

2. Land markets and land policies

2.1 A short (and necessary) introduction to land markets and their relevance in Latin America

When we talk about urban policies, initially, we need to understand how land markets work. That's because urban land markets are unique and distinct from other markets in several ways.

First, they don't obey the most established supply and demand structure. On the supply side, land it is fixed in the short run but can be expanded, either by bringing more land into use or by infill development (i.e., through local increases in floor to area ratio (FAR), which is the amount of floor space that is allowed to be built on a unit of land) or even bidding land from other uses, such as changing from rural to urban use (Smolka & Goytia, 2017). Investment in mobility infrastructure (such as roads and highways, subway lines, or trains) can also increase supply by bringing improved accessibility. In that, land use regulations can complement or constraint the urban growth process.

But an increase in the amount of land allowed by the planning system cannot result in a fall in the price of land and housing (Evans, 2004, 2008, Rodriguez-Posse & Stoper, 2019). In fact, land in many cities is acquired as a reserve of value, impacting the supply by retention fostered by expectations of upcoming upsurges in value that derive from urbanization. Mexico's unique experience with communal (ejido) lands being privatized also has important implications for new urban expansion and supply.

The demand side is affected by multiple externalities and expectations. Growing population and incomes intensify the demand for housing (and therefore for land and its value), stretching to the edges of the city and transforming rural into urban land. Indeed, the rise in income promotes a greater consumption of space and favors greater demand, which in many Latin American cities has taken the form of suburbanization but also informal settlements. During the pandemic of COVID-19, cities have been experiencing some of these movements. For the post-COVID phase, these pre-existing trends are expected to accelerate. New demand is added by telework professionals starting to demand bigger and better houses, while their lower commuting needs are pushing demand to the outer lower-cost areas, bringing about a perceptible change in the demand for land (Smolka & Goytia, 2020).

But this is not all. Making things even more complex, land is not a homogenous good like any commodity is. It is the uniqueness of each plot location that defines the level of access to a wide range of public goods and services, which are shown (or capitalized upon) in its market value. Land and housing can be less affordable in well-located central areas closer to where most employment is located. Low-income populations in Latin American cities are the most affected by that when located in the peripheries of cities, where land and housing are more affordable but at a greater distance to city centers, with higher commuting costs (both in terms of money and time spent traveling).

This relationship between land policies and housing is even more impactful in those cities where demand increases and remains high, while planning controls or exclusionary land use regulations limit the availability (supply) of land for some uses or halt the development of and affordable supply of serviced land at scale and with good accessibility. This is the case when cities set minimum size limits for single-family residential lots that are too large that increase the minimum consumption level and therefore minimum housing prices. For example, there is evidence from Argentina of the exclusionary effect of land use regulations (Goytia & Lanfranchi, 2009). There, while poverty is often blamed for the development of informal markets, overly stringent land use norms and regulations also play a central role by increasing land prices in the formal sector. High land prices generate substitution effects, encouraging lower-income households to move to the informal sector. In the cities of the region, informal land markets thus exist side by side with formal markets and are structurally interdependent. Given the spatial inequalities that prevail in many of the cities in the region, understanding land markets and land policy effects provides valuable insights for urban policy making.

2.2 The context for land in Latin American cities: what is special in these cities?

Latin America and the Caribbean countries are hardly a homogeneous entity. Its diversity emerges clearly when examining the land market structures and landownership of different countries. Some are very pro-market oriented, even allowing the state to allocate its considerable stock of fiscal land to facilitate investments in property developments directly through the market but contrasting with others, like Cuba's virtual elimination of land markets (Smolka, 2012). Land policies are particularly important. The region is the second most urbanized in the world after North America, surpassing even European urbanization levels. It has had a fast-growing urban population since 1950, increasing

from an urbanization rate of 41% in 1950 to 80% in 2015 (Vargas et al., 2017). Also, the average population density is significantly higher than that of cities in North America and Europe. Consequently, there is a more intensive use of urban land in this region. The second characteristic is that powerful changes are identified from 1990 to 2015, when population densities in Latin American cities fell by 13% on average during that period, and in the case of the larger metropolis, density fell by 4%. (Vargas et al., 2017). A closer examination of that growth indicates that a great part of such urban extension has occurred in areas without an expansion of infrastructure networks. And this is where the implementation of appropriate land use regulation and urban policy instruments reveal their great significance. On average, only over 50% of households living in the municipalities of 22 of the largest metropolitan areas of Latin America have access to water connections, and the average number of households with sewerage connections slightly exceeds 30% in the period 2017/2020 (Goytia, 2021).

A third fact that has been characteristic is that municipal authorities in many countries have remained overly reliant on often-constrained transfers from higher government levels. For example, in Brazil, up to 91% of financing for small municipalities came from intergovernmental transfers in 2006 (Freire & Garzon, 2014). Adding to that, taxes and other fees collected locally are very low: approximately 2.3% of gross domestic product (GDP) in developing countries as opposed to 6.4% in the developed world (Bahl, Linn, & Wetzel, 2013). One main concern of municipalities in Latin America is how the required infrastructure can be financed, as the demand for greater services, public goods and infrastructure is increasing investment needs generated by urbanization. Given that local governments are largely responsible for investments in services and infrastructure, the strengthening of the existing revenue sources of local budgets (e.g., own-source revenues by land-based finance instruments) are sought as crucial aspects for the region's ability to mitigate informal land market development. That's essentially why, over the last decades, the increase of fiscal decentralization and the recognition of the importance of a consistent local public finance for development led to the implementation of innovative regulatory and fiscal land tools to finance urban infrastructure (private-public partnership, concessions and privatization of public utilities, but also land value capture) and even to the enhancement of traditional fiscal instruments, like the property tax. Indeed, led by increased social awareness and demands for equitable public policy responses, many jurisdictions are executing innovative applications of land management and land-based finance tools as means to provide more socially inclusive development.

The infrastructure gap can be covered, based on the idea of capturing land valorization that is generated by land use administrative changes (i.e., increases of FAR or zoning changes) or by recovering investments done for the provision of urban infrastructure and services. This is the central concept of value capture used to finance local development providing the most-needed infrastructure. Capturing the increase in land values created by public investment and the broader process of urban development enables scarce public resources to be recovered and reinvested in additional public goods, such as the infrastructure services the development requires. Depending on the legal frameworks within which they operate, local governments have an opportunity to tap these major resources using a variety of land-based financing tools to meet public expenditures as well as support spatial growth and promote greater social integration. The main rationale for this considers that land values derive from regulatory approval for changes of use from agriculture or for more intensive redevelopment of plots or older buildings. This uplift in value attributable to an administrative decision is an efficient target for revenue generation. Another part of the value of urban land stems from public investment. The very direct and obvious connection between public investment in infrastructure—such as water supply or roads—and the enhanced value of newly serviced land makes it particularly appropriate to secure a share of the uplift through “betterment” levies, development charges, or even property taxes (Ingram & Hong, 2012, Smolka, 2013). All these facts have been encouraging many socially accountable governments across the

region, like Brazil and Colombia, to pass explicit legislation calling for consideration of value capture principles.

2.3 Why do we care about land use regulations? From zoning to land value capture

In most cities, land use regulation, of which the most studied form is zoning, plays a relevant role in the determination of the type and intensity of land development. Zoning regulates the range of uses (commercial, industrial, residential) and the intensity of each use (e.g., by floor-to-area ratio) and can therefore alter city growth or densification. It can also provide public goods such as parks or pedestrian roads. In all, from a welfare economic perspective, land use regulation that corrects for agglomeration externalities and provides otherwise inexistent public goods should have a crucial role in improving productivity, livability, and sustainability of cities. Nevertheless, land use regulations, as enacted in many cities, are not neutral in land markets. Although those are designed to manage externalities requiring some mechanism for dispute resolution, especially in densely populated areas, the nature and scale of the welfare impacts can be very different on different income groups. As a result, it may have unintended welfare distribution effects which might not been previously considered by policy makers.

At first, they are plenty justified as indispensable to avoid the negative externalities caused by incompatible uses or to stop overdensification in places where the cost of providing services is too high. On the other hand, they are also associated with significant land value incremental windfalls for well-located landowners when nimbyism and other elitist mandates dramatically affect the supply of land and housing costs, driving exclusion for certain groups who cannot afford minimum standards, like those affecting plot sizes. Moreover, the spatial separation by zoning of higher income zones and groups results in dramatic intra-urban differences of service provision and infrastructure. Indeed, higher-income groups are ready to pay more for housing in areas where land uses ordinances guard them from the presence of nuisances in the form of negative externalities produced by the presence of lower-income housing (Smolka & Goytia, 2019). Thus, an evaluation of the benefits of land use regulation cannot be done without assessing the costs on land markets and affordability.

Academic researchers studying developed countries have analyzed how land use regulations explain the inelasticity of the land and housing markets, limiting housing supply or affecting market prices and affordability—even functioning as a social exclusion mechanism. All these studies show a similar conclusion: the degree of land use restrictiveness is positively correlated with property prices (Quigley & Raphael, 2005; Ihlanfeldt, 2007; Glaeser & Ward, 2009; Gyourko, Saiz, & Summers, 2008; Zabel & Dalton, 2011). Such studies cannot be easily extended to developing countries or Latin American ones for at least two different reasons. The cited evidence presents some essential differences when looking at how land use regulation works in developing countries (Alterman, 2013), where a dual, formal/informal market prevails (Smolka & Biderman, 2012, Goytia & Pasquini, 2018). Some studies looking into the association between the regulatory environment and informality in some Latin American cities provide evidence of the development of the informal sector associated with the characteristics of land use regulation (Lall et al., 2007; Duranton, 2008, Goytia & Lanfranchi, 2009; Lima & Silveira Neto, 2019; Monkkonen & Ronconi, 2013; Biderman, 2008; Henderson, 2007; Feler & Henderson, 2011; Goytia & Pasquini, 2013; Goytia et al., 2015). Those studies concluded that a large segment of the population could not realistically comply with strict urban standards and “exclusive” land use regulations.

In the cities of the region, the regulation of residential land varies widely among the cities and countries in the region. There is significant heterogeneity not only in the nature of this type of regulation but also in terms of its content (e.g., zoning, approval costs, and land management instruments), as well as the establishment of inclusionary elements. Not only can we distinguish spatial

heterogeneity across countries but also substantial variation across metropolitan areas and somewhat less variability across municipalities within a given metropolitan area, which enjoy the same market area (Goytia, 2021). What follows is a summary of the main aspects revealed by the comparison of a large sample of 340 Latin American municipalities/cities. Those are part of 21 of the most important metropolitan areas in ten different countries. It is the most comprehensive action yet performed to measure the regulatory environment at the municipal level (Goytia, 2021). Figure 7.1 shows the metropolitan areas included in the sample and the number of municipalities in each.



Figure 7.1 Metropolitan areas and municipalities in the Goytia (2021) study of land use regulation in Latin American cities.

Source: Own elaboration by the author for this chapter.

Most municipalities devote much of their land to residential uses (low-, medium-, and high-density residential uses). Residential uses ranged from 45 to 75% of the total area but increased as city population decreased, since larger cities have more complexity of uses (including commercial and preservation areas, among others). Some central cities (from the metropolitan areas) have shares of land zoned for low-density residential use that tripled or quadrupled the median value for that category of cities. When these restrictions are imposed, they might constrain land use in the central part of the city, where density would be higher than that limit and allocated to more complex uses, such as multifamily housing and mixed uses. These low-density residential locations are the “exclusive zones”, where planning requirements are more stringent and elite residential and commercial uses are located (Garza, 2016; Gilbert, 1988). Consumers of land in these city areas offer an extra price to benefit from these positive externalities of regulation, inexistent in other parts of the metropolis. Figure 7.2 displays the ratio of residential zoning to all zoning uses by type of zoning and city size in the selected sample of metropolitan areas.

Lot sizes are not uniform within most cities, either. The less stringent ones for low-density single-family residential use range from 60 square meters in Bogota (Colombia) to 450 square meters in Santa Cruz de la Sierra (Bolivia). In fact, these restrictions might end up limiting the number of people per square km, thus constraining densities but also making housing more expensive when the “minimum consumption” unit of land is high. While minimum lot size is one important land use regulation, cities have increasingly adopted other rules that also impact new construction. In many cities, not only is the share of multifamily housing low, but the density levels are far too low in many central and highly populated cities. Figure 7.4 displays the most frequent minimum plot size in each of the 21 selected metropolitan areas, giving an outline of the variations in the cities of the region. Such restrictions may cause the city to spread out and encourage spatial expansion, requiring the financing of additional infrastructure, which, in many cities of Latin America and the Caribbean, has become increasingly elusive. The irony of this outcome is that an attempt to maintain lower residential densities in one central part of the city causes a density increase in other areas. It might also be the cause of increased land and housing pieces leading to dense informal settlements in central city areas (Goytia & Pasquini, 2013). This suggests the possibility that current land use controls are sub-optimally restrictive, and it leaves us with the puzzle of understanding at further stages why some cities are not zoning for higher densities than others of the same size.

Social inclusion areas are not prominent in the share of residential zoning in the cities of the region. There are very few exceptions, like Bogota and San Pablo, that allocate 29 and 15%, respectively to social inclusion areas, and Medellin, Belo Horizonte, and San Salvador, with from 5 to 10% of their area zoned for residential uses designed as zones of social special interest (ZEIS). In those areas, FAR and plot sizes are less stringent, bringing better housing access for lower-income households. Some municipalities in El Salvador stand out for the large share of area that is zoned for such use.

The most frequent FAR values are displayed in Figure 7.5. There is a great dispersion in FAR standards, with many higher and lower values than the median FAR for low-density residential zoning. This became clear for cities in the same population size category, even when classified by their distance to the city center. Larger cities, those over 300,000 up to 12 million inhabitants, present lower median FAR values than their counterparts of smaller size and a larger frequency of much lower values than higher ones.

Finally, development fees vary a great deal across cities and can be expensive related to minimum income, as shown in Figure 7.6. The median approval costs for single-family housing (as a share of minimum income) are higher in Quito, Mexico, Lima, Callao, Montevideo, Cordoba, and Buenos Aires. Some of them also display a large variability of costs within municipalities in the metro area, while others apply a fixed rate in all the metropolitan jurisdictions. Dispersion is even greater for multifamily projects (Figure 7.7). Some metro areas have very high median costs, like Guadalajara and Quito. Delays and uncertainty in the approvals process can be costly for developers and add to

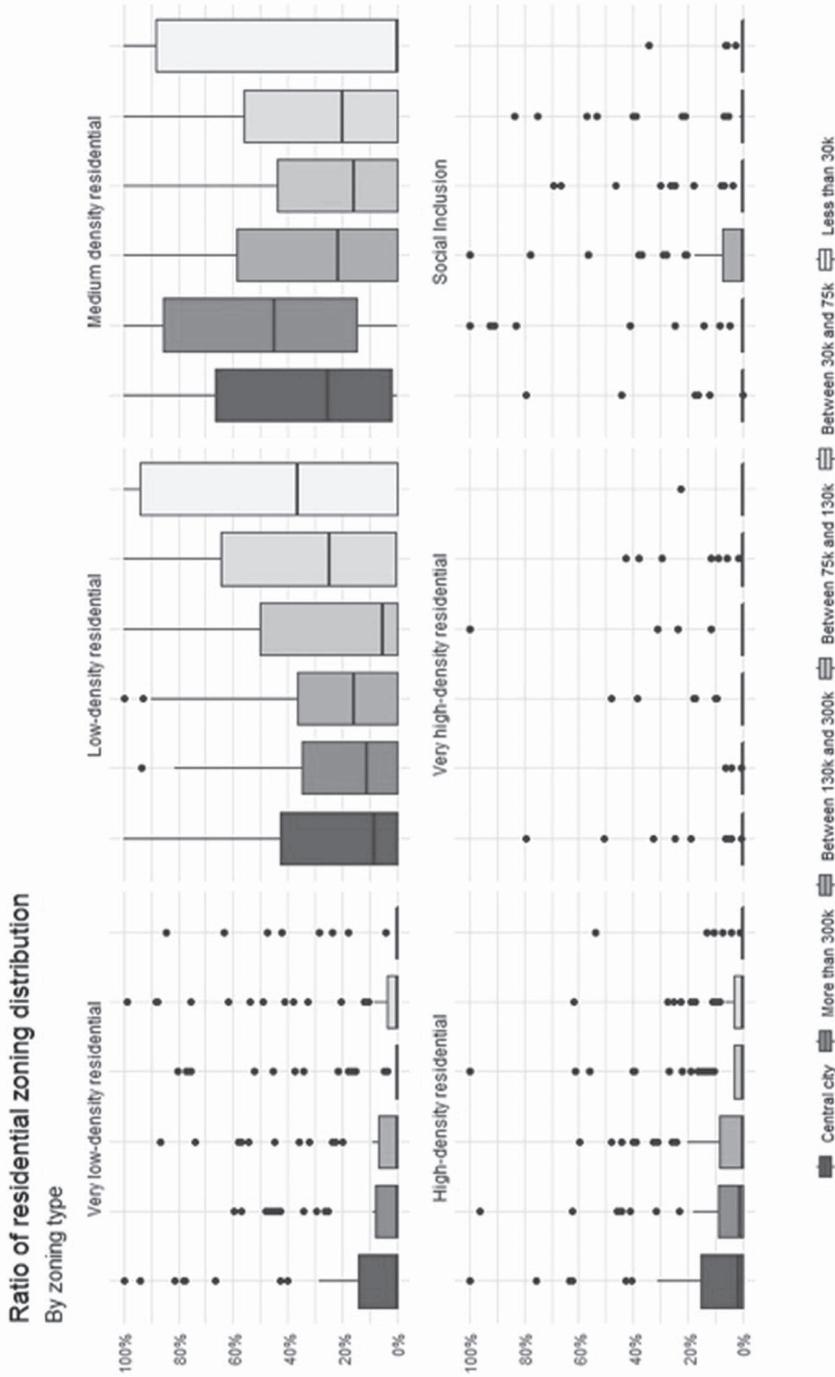


Figure 7.2 Ratio of residential zoning to all zoning uses, by type of zoning and city size.

Source: Own elaboration for this chapter based on Goytia (2021).

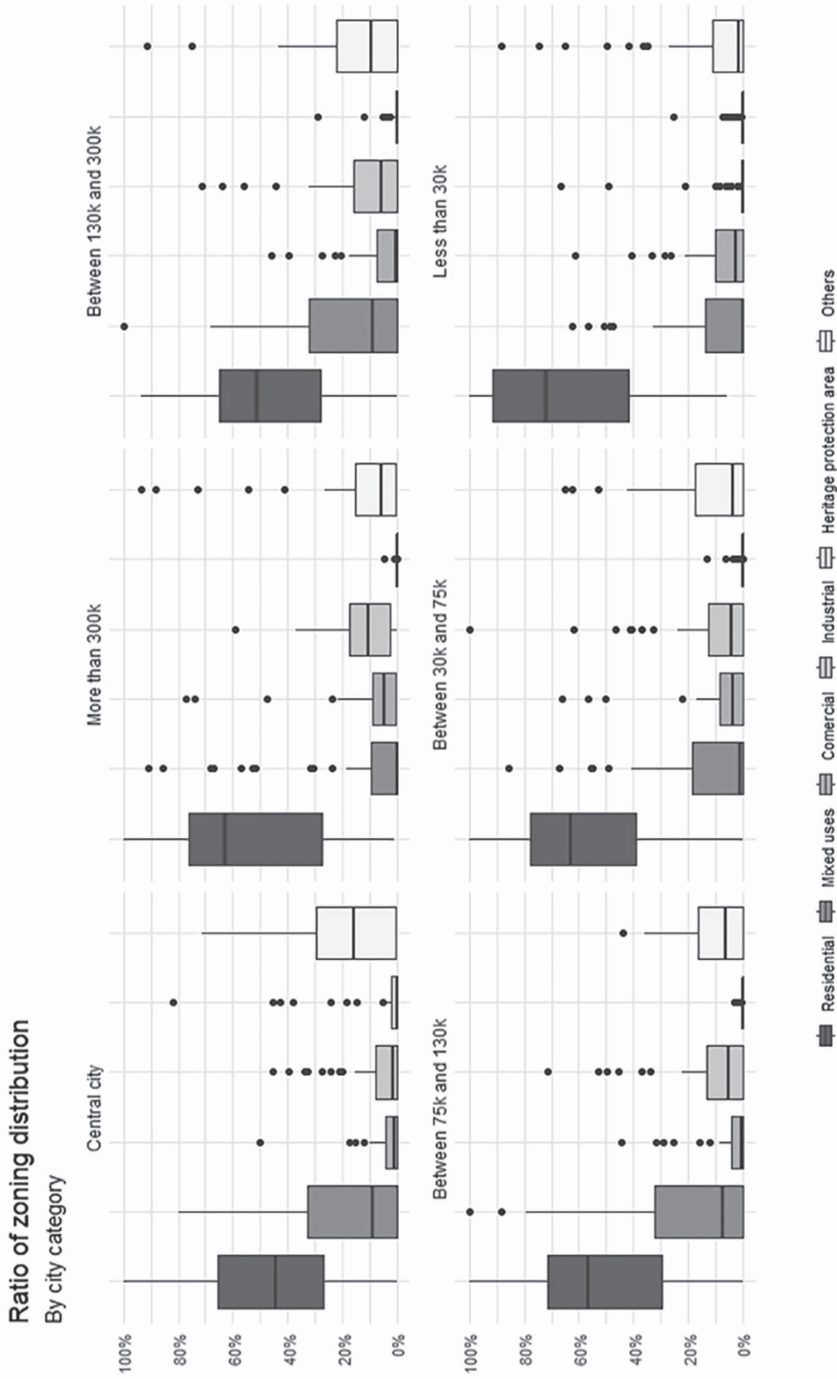


Figure 7.3 [captions required]
Source: Own elaboration for this chapter based on Goytia (2021).

the final cost of housing, but we were unable to collect information about the typical time needed for project approvals and building permits.

There is an important additional element of the regulatory environment, usually hard to measure and missing in land-use studies: the enforcement of land-use regulation. Conceptually, the existence of land plans (and different regulatory instruments) has little impact when enforcement is poor. When enforcement and effective implementation fall mostly outside of the realm of government implementation capacity, planning and land-use regulation does not control all factors influencing land and housing markets. Therefore, the ultimate impact of strict rules on land and housing prices is unclear and might result in larger informal land and housing sectors (Monkkonen & Ronconi, 2013, Goytia, 2020). Moreover, lower levels of compliance with rules can result in negative externalities and thereby exert downward pressure on the price of formal land in cities of the region. Therefore, municipalities in Argentina with higher levels of regulation have lower rates of compliance, and lots selling legally in these municipalities have lower land prices (Monkkonen & Ronconi, 2013)

Evidence on the levels of enforcement collected from perceptions of different actors in a large sample of cities in Latin America and Caribbean countries in 2021 indicates that the perceptions of noncompliance are high. For example, non-compliance within central areas of the cities is penalized much more often than on the peripheries. Interestingly, when analyzing cities in detail, there are some cities (i.e., those characterized by a very high level of informality) in which informality is naturalized in citizens' views as a very common practice.

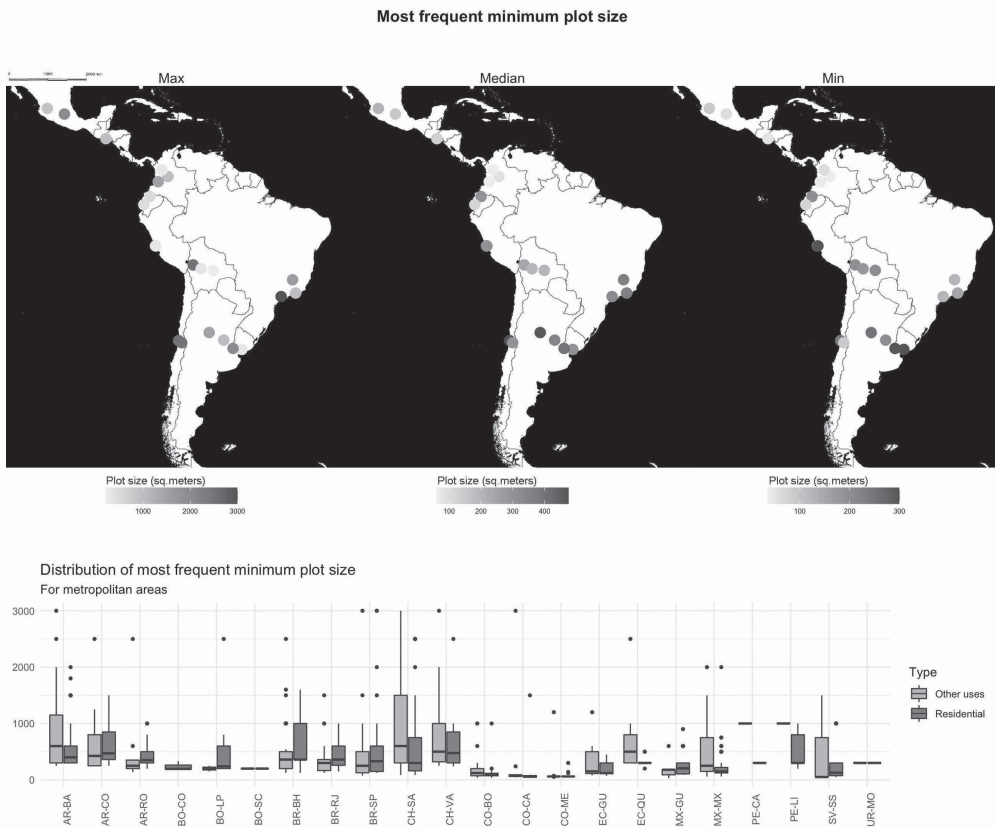
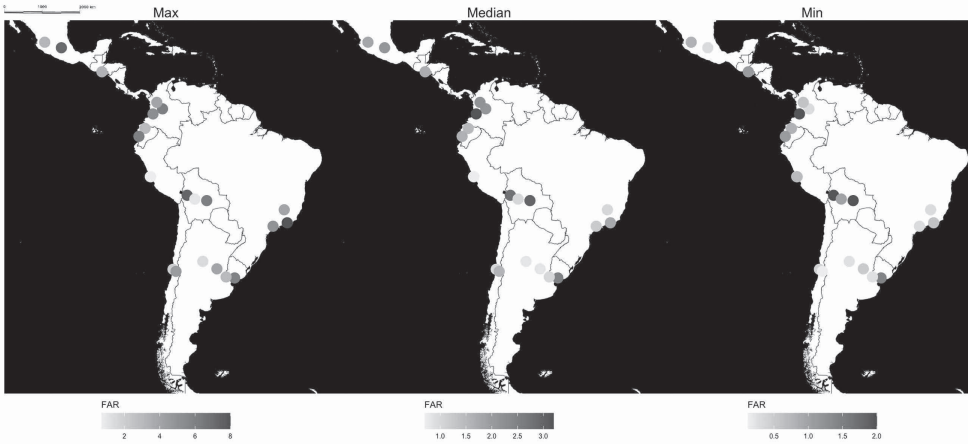


Figure 7.4 Minimum plot sizes, frequency for residential uses, by metropolitan area.

Source: Own elaboration for this chapter based on Goytia (2021).

Most frequent FAR



Distribution of most frequent FAR
For metropolitan areas

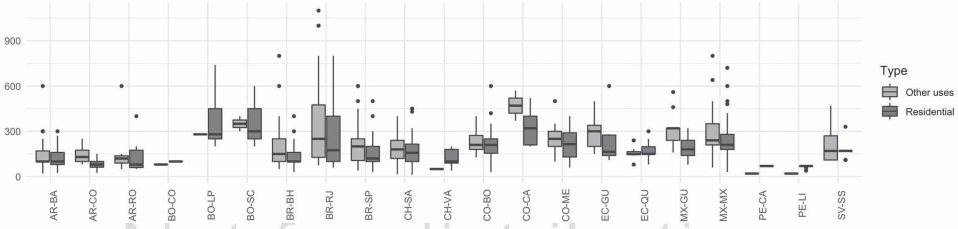


Figure 7.5 Floor to area ratio, frequency for residential uses, by metropolitan area.

Source: Own elaboration for this chapter based on Goytia (2021).

Approval costs (USD)
For a single house of 100m²

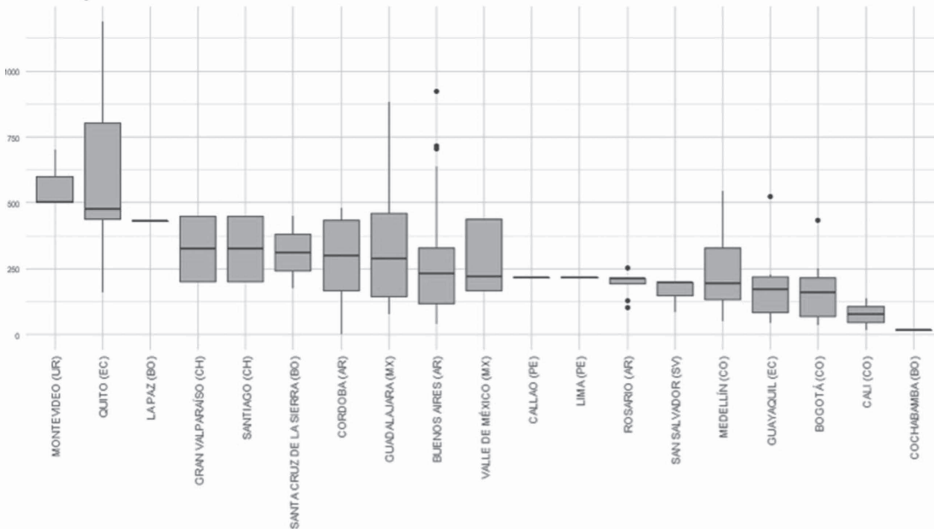


Figure 7.6 Approval costs for a single-family house of 100 sq. meters, in US dollars.

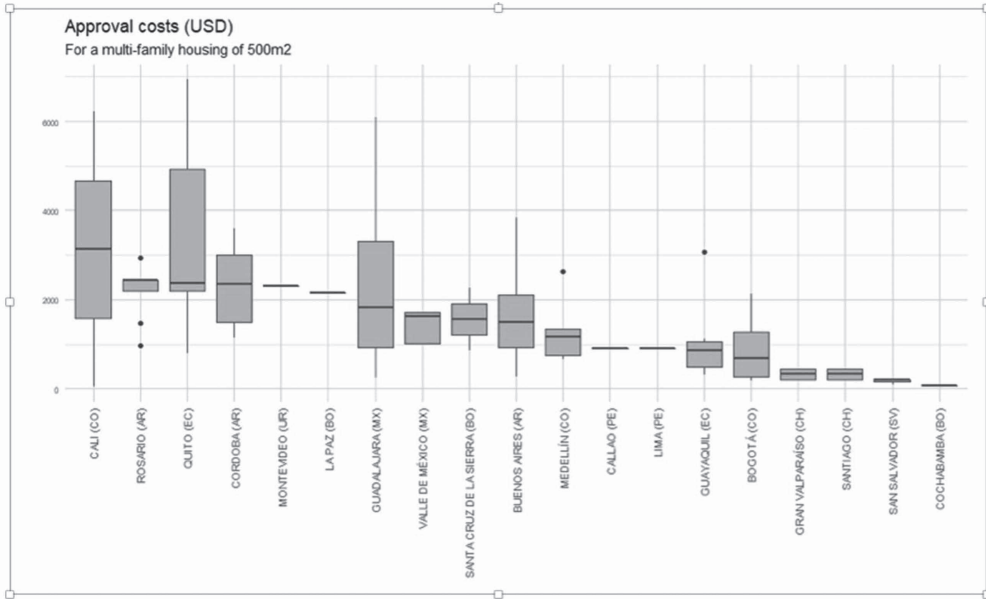


Figure 7.7 Approval costs for multi-family housing of 500 sq. meters, in US dollars.

Source: Own elaboration for this chapter based on Goytia (2021).

3. Land-based finance: innovation in land policies in Latin America

Cities in Latin American countries are growing and their needs for new infrastructure and public goods provision severely increasing at an unprecedented rate (Bricchetti, Mastronardi, Rivas, Serbrinsky, & Solis, 2020; Frisari & Gallardo, 2020). Indeed, the COVID-19 pandemic has increased the relevance of all such challenging aims. A large number of the countries in the region are also undergoing a decentralization process, with local and city authorities bearing greater responsibilities for public service provision (Goytia & Sanguinetti, 2017). To respond to this, it has been beneficial for city authorities both to expand existing revenue sources and explore new financing options to match higher demand for public goods and services based on untapped revenue sources from land (Goytia & Sanguinetti, 2017). Local governments have an important responsibility in terms of urban planning, and their actions and investments impact the land value of properties. This change in value has received alternative denominations: development value, betterment value, planning gain, plus value (*plusvalía* in the Spanish tradition). In practice, betterment values can arise from different public actions within an urban plan (public investments in infrastructure and services, changes in land use norms and regulations, transportation investments and redevelopment, etc.) For example, in the region, changes of rural land to urban use usually increase plot values by above 400% (Bouillon, 2012), while increases in FAR and density allowances are strongly capitalized upon in land prices. In Rio de Janeiro, the markup for developing new land at the low-income urban periphery is huge, with fully serviced land selling for US\$145 per square meter compared with an investment of just \$10–35 per square meter (Vetter et al., 2011). Even the expectation of new public investments can boost prices. In Cali, Colombia, announcement of a future low-income housing project lifted the per-square-meter price of land in the area by a factor of eight within a year and a half (Bonilla & Loaiza, 2006). This valorization can be “captured” for the benefit of the community to the extent that the factors that generate it are the result of public decisions or actions (Smolka, 2013). Accordingly, land value capture instruments present an array of cases associated with this variety of public actions.

Attention to value capture tools as a source of public revenue has been increasing in Latin American cities. In fact, betterment levies are probably the oldest form of land value capture in the region and have been around since a century ago in Colombia, financing bridges and roads (Blanco, 2017). Discussions on the need for more effective urban policies to include land base finance tools started as early as the 70s in countries like Brazil. Late in the 1990s, a significant number of national governments enacted them. Taking a leading role in the region, the most comprehensive legislations are the Brazilian Statute of the Cities of 2001 and Colombia's Law 388 (of 1997). Besides Brazil and Colombia, Uruguay and Ecuador approved new legislation in 2008 and 2010, respectively. Others are joining them, like the Peru National Urban Development Law, recently enacted, or cities in El Salvador and Argentina. Other countries are conducting high-level national debates on how the legislation should be formulated. (Furtado & Acosta, 2020; Goytia, 2020).¹ Nevertheless, instruments capturing land valorization due to public action have been adopted even in the absence of regulation at the national level. One example is many cities and provinces in Argentina, where a national framework for land value capture (LVC) is inexistent, but local jurisdictions display an innovative use of tailored LVC instruments adapting the ones that are available. Indeed, when they do exist in countries such as Colombia or Brazil, they may not be consistently applied in all jurisdictions (Smolka, 2013, Goytia, 2021). Added to this, there are significant differences of implementation methodologies, including how the resources are collected and applied, for example, whether they are used to finance specific projects related to infrastructure, more general uses, or even current expenditures and what the level is of their impact on providing services, land, and housing to certain groups of the population, such as the lower-income households (Mahendra et al., 2020; Goytia, 2021).

Over time, experts have presented a comprehensive enumeration of these land policy instruments considering their specific characteristics. Maldonado et al. (2006) grouped them based on objectives, such as instruments that facilitate the provision of land for public purposes, those that allow the financing of the infrastructure and social equipment that the city requires, those that seek a balanced treatment for owners in relation to the burdens and benefits associated with the urbanization process, and those oriented to land provision in general. By their nature, they tend to be classified in *regulations*, such as charges or exactions, building rights charges, or land readjustment, as well as *fees*, such as betterment levies, contributions for improvement or valuation, and *taxes*, including differential property tax rates. These divisions are not exclusive in Latin America, because the same instrument may embody subtleties that defy these categorizations. Depending on the characteristics of the improvement and the nature of the LVC instruments used, the burden of the recovery can be decided unilaterally by the government, based on technical considerations. In those cases, payment is of compulsory compliance by the benefitted agents. Alternatively, in the case of specific projects or readjustment arrangements, for instance, the payment can be negotiated with landowners and/or urban developers. In general, the type and nature of the project will determine the advantage of choosing one of these instruments. The following selection describes the main characteristics of a group of instruments and their implementation. Figure 7.1 presents a synthesis of LVC instruments, and a glossary is included in the Annex.

3.1 Regulations

Land readjustment schemes

Land readjustment is a valuable tool used in regeneration projects involving private and fragmented land ownership (Suzuki et al., 2015). This instrument allows municipalities to have the resources to plan and guide expansion or to redevelop central areas where land ownership is very fragmented. Its strength is based on enabling the public and private sectors to jointly undertake any required development project intended to satisfy community interests through provision of infrastructure.

The development is based on a land-use plan for the area, which includes new subdivisions and land uses, and the designation of zones for roads and public open spaces. The local government assembles several privately owned land parcels in an area to be developed. In exchange for giving up a part of their land for streets and networks, landowners receive an urbanized plot (equipped with basic services and access to the newly built roads). In the case of rural areas converted into urban ones, each landowner benefits with a plot with complete infrastructures and new uses. This new parcel is smaller than the original but yields a higher value due to the redevelopment. The public administration holds certain parcels to be sold at market prices or auctioned in public bids to recover the costs of its investments in infrastructure and service delivery. Some of them or the revenues obtained from selling them can be used for specific projects like social housing or neighborhood upgrades.

This instrument enables public-private partnerships and is used in several Colombian cities (Bogota and Medellin). It has been a planning tool in place in Colombian legislation since 1989. It is used to develop urban projects intended to guarantee an equitable distribution of benefits and burdens derived from the development of partial plans seeking the optimal reconfiguration of property within the area to avoid parcel-by-parcel development and improve public spaces. Fenicia is an example where the “land readjustment” mechanism has been applied in an inclusive way in Colombia. This renovation project is an interesting and contrasting case to other urban renewal strategies, since this land policy instrument has been used in an innovative way to try to avoid displacement by accommodating the original neighborhood residents in the future development. To achieve inclusionary aims, the initiative carried on by private agents recognizes the acquired rights of the existing owners and residents (Pinilla, 2019). In this model, when the low-income owners handed over their properties, they received apartments from the new project (Goytia et al., 2019).

Charges for building rights and exactions

During the last decades, land-based finance instruments that charge for building rights have been adopted in many cities, based on two concepts: first, the notion that in order to support the additional building rights or higher land uses, governments have to invest in urban infrastructure and services and second, the separation of building rights from land ownership rights, which allows the public to recover the land value increment resulting from development rights over and above an established baseline. As a result, resources can be transferred from public infrastructure budgets for other social sectors (e.g., education, health, and housing) that in the past would have been sacrificed because of overall constraints on public expenditures (Smolka & Goytia, 2019). The fees are applied to all properties in the city or in a well-defined zone based on the master plan and calculated according to a well-established predefined criterion.

Charges for development or building rights are used in many countries. In this category can be grouped charges for additional building rights (Brazil) (called onerous concession or *outorga onerosa do direito de construir*; OODC), participation in capital gains (Colombia), the special contribution for capital gains (Venezuela), and the return of valorization (Uruguay). Perhaps the most relevant aspect, in a comparative framework, is the share of the generated land valorization that the instrument intends to recover. Adding to that, it is worth noting that the onerous concession, unlike other instruments such as participation in capital gains in Colombia, is not defined as a tribute but as a counterpart resulting from a benefit granted to the landowner (the building rights). It entitles the public administration to sell those rights as a public patrimony belonging to the community. Thus, when landowners or developers want to build above the free basic FAR up to the maximum allowable FAR, they have to buy additional building rights.

Sao Paulo is Brazil’s land value capture pioneer. Many municipalities’ LVC regulatory frameworks and schemes have been derived from the experience of this city (Suzuki et al., 2015). The city government sells building rights as an integral part of urban redevelopment projects to raise funds for

infrastructure investments based on the incremental value created by public investment, land use, and zoning changes (Sandroni, 2010). The difference between the basic FAR and the maximum FAR therefore equates to the building rights that must be acquired from the government for development of additional constructive capacity. In 2014, the city of São Paulo instituted a maximum FAR that ranges from 1.0 to 4.0 according to zoning and a universal basic FAR of 1.0 as the building right that applied to all landowners. The maximum FAR, limited to 4.0 even in the central business district, is not as high when compared to other megacities of the same size. It's still not clear if such a threshold might have unintended negative impacts on urban development patterns (Suzuki, Cervero, & Iuchi, 2013). The city plan determines an inventory of all building rights, and the revenues produced from their sale are placed in an urban development fund (*fundo de desenvolvimento urbano*) aimed to finance public urban investments, including social housing and informal settlement upgrades throughout the city.

Based on these schemes, the city has attracted private real estate investments into its designated urban renewal areas, involving the restructuring of large areas of the city through land-based incentives in Consortia Urban Operations (UO), which are public-private partnerships relating a broad number of agents, from public to private and community. (Montandon & de Souza, 2007). Substantial revenues are captured by air rights sales in these areas. In 2013, Sao Paulo distributed about US\$130 million in onerous concession payments to finance projects that included bus terminals, transportation corridors, parks and green areas, slum regularization, historical preservation, and drainage (Maleronka & Furtado, 2013). It is argued that the additional construction rights, allowing a greater capital-to-land ratio invested in the same plot, stimulated the interest of builders in this type of instrument. In some areas, the onerous concession was equivalent to 50% of the original valuation of the land (Sandroni, 2018).

Adding to that, an iconic case in Sao Paulo is the great amount of urban renovation projects financed by certificates of additional building potential (CEPAC), which are a market-based instrument to finance public urban investments through air rights transactions within designated UOs. The instrument is similar to an onerous concession, and it is used to raise infrastructure investment funds by selling the additional building rights and land use changes in the transformations induced by urban development policy. The amount of the CEPAC to be issued corresponds to the additional square meters that the present and future urban infrastructure in the designated project can support (Suzuki et al, 2015). Its distinctiveness is centered in two issues. First, it raises funds for urban infrastructure by auctioning out tradable air rights in the form of certificates through the Sao Paulo Stock Exchange. Their price can be estimated as the residual land value between the actual plot with the full benefits of additional air rights and the plot without any additional air rights (Maleronka & Pires, 2013). However, the final sale price is determined at auction. Second, the main advantage is that the city can collect the revenues from additional FAR before the project starts. The resulting revenues are invested to finance the entire infrastructure required by the project in the urban area where it operates (Sandroni, 2018). Indeed, by OU law, the revenue obtained through the sale of CEPACs goes to a specific urban operation fund that can only be invested in the predetermined interventions proposed in the UO project. In two projects, Água Espraiada Urban Operation (OUCAE) and Faria Lima, they raised a total value of US\$2.5 billion between the years 2004 and 2012.

Applying land-based finance instruments has produced positive economic benefits but still mixed equity outcomes in São Paulo (Mahendra et al., 2020). For example, the OUCAE project was envisaged with a clear equity aim to address the informal housing problem (Mahendra et al., 2020). There, 34% of the total revenue was applied to investments like infrastructure and urban services that directly benefit low-income families. A share of plots inside the UO area was dedicated to affordable housing, known as special zones of social interest. Inclusive land use regulation such as ZEIS is the instrument that delimits areas of the city with special urban planning criteria. This category of zoning allows the establishment of more inclusive parameters and includes both informal areas

and subdivisions that require urbanization, vacant areas destined by legal decision for the provision of housing, or even land or underutilized properties in areas that already have urban infrastructure, usually in the central areas in which social housing can be developed (Ferreira & Motisuke, 2007, pp. 33–34). In the UO projects, these special areas of social interest were included as sub-areas in which restricted or priority occupation for social interest housing is required.

Nevertheless, the quest for social inclusion emerged and is, however, far from being solved (Leite et al, 2019). Operations have not always resulted in desirable spatial development when developers are seeking a high return on investment and build high-rises and mostly high-end properties (i.e., luxury residential buildings, offices, shopping malls) via an OODC or CEPAC in the city center where most jobs are found (Suzuki et al., 2015). Indeed, the supply of affordable housing in the city center continues to be very limited, in spite of the public administration commitment to using the revenues from OODCs, CEPACs, or higher FAR incentives than typically permitted by zoning norms, aimed to promote the construction of social or affordable housing (Suzuki et al., 2015). Thus low- and lower-middle-income households are still located in the peripheral areas with lower accessibility to jobs and opportunities.

This list of options of regulatory land policy tools is not exhausted without describing the use of exactions. When they are applied, landowners or developers are compelled to make cash or in-kind contributions to obtain special approvals or permission to develop or build on their land. The public sector can use these fees to fund public goods, services, and infrastructure (Germán & Bernstein, 2018). Smolka (2013) indicates that exactions are the most common value capture tool used throughout Latin America. These contributions may be stipulated through subdivision or development negotiated on an individual basis.

3.2 Fees

Betterment contributions

Betterment contributions and special assessments are fees paid to the municipality by specific owners who benefit from a public improvement or service. The instrument is a longstanding practice in some Latin American countries. It is included in the legislation of most Latin American countries (Borrero-Ochoa, 2014). In Colombia, a pioneer in the region, this levy, called *contribución de valorización* (CV), has been collected for 100 years, since 1921 (Smolka, 2013). There, the tool has an extensive record of application (albeit uneven) but also a record of collecting substantive revenues to finance different public works, although collections have fluctuated over time.² However, collection of betterment contributions is not consistent among countries or within countries among their jurisdictions or across time, and it still plays a negligible role in most jurisdictions' finances, typically accounting for much less than 1% of own local revenues (Smolka, 2015).³ So far, however, the uses of the instrument are very diverse in different cities. In formal areas, the most common uses are the provision of utilities (e.g., water, sewage), roads, and paved streets. Some municipalities implement this instrument in informal neighborhoods when there is an improvement or public service that benefits the plots of land, and (informal) owners who are benefited pay a fee, charge, or contribution to cover the cost of the improvement. It is more used in small jurisdictions, possibly because they collect little from other revenues or are even more in need to use the instrument as a necessary requirement to finance infrastructure works (Borrero Ochoa, 2013). At the same time, the expectation of upper levels of government support in infrastructure finance has impacted the scale of implementation, reverted when such flow of resources is limited.

Although the benefits of paying a betterment fee for an investment whose impact will exceed the contribution are straightforward, the application of this instrument might be technically complex, explaining its poor overall performance as a revenue source. The international experience helps

us identify possible advantages and disadvantages. For instance, four administrative conditions for implementing a betterment levy are the capacity to quantify the impact on land values, identifying the beneficiaries, and the political will, together with the public mechanism to implement the levy (Day, 2005; Bahl & Wallace, 2008). In fact, the issue of the payment capacity of the contributor is recognized as a problem in most of the countries that apply this type of levy when the procedures to apply the levy do not include the study of the payment capacity of the contributors. In some legislation, it is explicitly stipulated (Honduras, Brazil, Panama). Others distribute the burden of the betterment levy on the households according to the position of their property in a quartile distribution of property value. This assumes that the greater the cadastral value of the properties, the greater the impact of the improvements and the greater would be the household's ability to pay for the contribution, but this assumption cannot be generalized to all cases. Colombia is a country more advanced in the evaluation of the payment capacity in the region. In the case of properties of residential use, the authorities use data of the household survey on living conditions and the national income and expenditure survey, which collects information on employment conditions, income, and expenses. (Borrero Ochoa, 2013).

3.3 Land and property taxation

The first advantage of this tax is the prediction and stability of revenue for local governments. It can be differentiated from other LVC instruments since it provides a constant flow of resources over time, as opposed to revenues only associated with a certain action. Another attribute is the ability-to-pay principle that refers to the characteristic as a potential progressive tax and the knowledge of local taxpayers' capacity. In this sense, not only due to the structure of differentiated rates and scales of the tax base but also because of the allocative objective, the property tax particularly serves to reduce socio-economic disparities, financing local public goods and services (Goytia & Cristini, 2019).

Several limitations faced by local governments in developing countries are associated with unaffordable administrative costs of keeping cadasters complete and updated, the lack of skilled human resources to administrate the tax (e.g., for the valuation of the tax base), the delay in the revaluation of the tax base, and the lax capacity of enforcement for tax contribution (Bahl & Martinez-Vazquez, 2007; Sepulveda & Martinez-Vazquez, 2012, Bahl, 2011). Institutional and political aspects are also crucial for the success of property taxation. An inefficiency in the administration can lead to weak performance, introducing unfair socio-economic consequences, such as tax inequity and erosion of the public acceptance of the tax (Pawi & al., 2012; Fiva & Rattsø, 2007; Olowu, 2004; Bonet, Muñoz Miranda, & Pineda Mannheim, 2014).

In the region, a growing number of municipalities demonstrate the feasibility of operating efficient property taxation systems (De Cesare, 2012). Nevertheless, there is a large untapped potential for cities in the region to increase their revenues from land and property taxes (Goytia & Cristini, 2017). The ratio of the property tax to GDP is smaller in developing countries, and Latin America is not an exception (Bird & Slack, 2004; Sepulveda & Martinez-Vazquez, 2012; Bonet et al., 2014). Property tax revenue to GDP is 2.12% on average in OECD countries, 0.6% in developing countries, and 0.37% in Latin American countries (Sepulveda & Martinez-Vazquez, 2012).

Depending on the political and fiscal organization of the country, it is possible to find broad differences of property taxation systems (Goytia & Cristini, 2019). Table 7.1 illustrates these variations. For example, the property tax in Bolivia is the main local tax, and thus it is possible to find a clear relation between local taxes and local public goods and services. The tax base is not compiled from cadasters: the owners of the properties provide the required information for valuation. Different to that, in Colombia, the valuation of properties is based on local cadasters (Bogota, Antioquia, Cali, and Medellin). In some cases, cadasters are managed by private institutions and valuation of properties is updated yearly using the consumer price index (the adjustment is between 70 and 100% of the

price index variation). Occasionally, this indexation of property values has turned out in overvaluation as compared to market prices. This gap is usually corrected by accepting the owner's valuation of the dwelling. Adding to that, in most Colombian cities, the rate structure is differentiated progressively based on social conditions. A greater level of centralization of their property taxation system compared to the countries commented on previously is observed in Costa Rica. There, the rate fixed at the national level reduces the incentives for local governments to improve tax collection performance (Gomez Sabaini & Jimenez, 2011). Finally, Chile has the greatest centralized property taxation system among Latin American countries. The tax base is composed of land and buildings in urban areas (not rural), and the fiscal valuation of each property is done by a central government institution. Tax rates are also fixed at the national level and by national law. The property tax structure is characterized by a progressive scale of rates but also by a large non-taxable range of properties. The collection is assigned to the local governments, but between 60 and 65% of the collection goes to a common fund that reallocates it across municipalities according to the distributional criteria. This procedure does not recognize the relation between the property tax and the provision of local services, reducing the incentive for owners to contribute with the tax (Gomez Sabaini & Jimenez, 2011; Sepulveda & Martinez-Vazquez, 2012).

Some jurisdictions implement temporary rate increases in property taxes as a form of value capture tool, involving the application of an additional charge used to finance large-scale urban infrastructure. In Buenos Aires, it was used to pay for the extension of the subway line, applying an extra charge to all city residents, plus another surcharge for those residents within 400 meters of the stations (Cuenya et al., 2003). However, the amount of revenue collected was not as great as what is collected through other revenue sources (i.e., expressway tolls, betterment contributions, and automobile licenses) that generated four times that amount. Other jurisdictions use a special taxation based on the imposition of higher rates for either empty or idle land than for those that have been built, for example, in Niterói, State of Rio de Janeiro (Furtado & Acosta, 2020). The implementation of the progressive property tax on vacant land in Brazil is considered with other urban policies and instruments, such as the "real estate consortium" (City Statute, Article 46).

Tax authorities in Latin America tend to favor the conventional property tax on land and buildings, although a land value tax, as a system in which the property tax falls entirely on the land value, has in theory many desirable features compared to the conventional land-plus-building property tax. There are very few experiences of land taxation in the region. The main reasons can be attributed to the long tradition of property tax collection and the difficulties of land value assessment methods. They have also been reluctant to implement land value taxation in part because it could be regressive for the large numbers of low-income families for whom the land represents a higher share of their property value than their precarious housing structures (De Cesare, 2004). When implemented in Mexicali for 20 years, it outperformed comparable municipalities with conventional tax bases (López Padilla & Gómez Rocha, 2013).

4. Seeking evidence on the effects of land policy tools implemented in the region

Evidence from around the municipalities in Latin American now starts to suggest that the potential exists for urbanization to raise living standards if some suitable land management conditions are established.

Experiences in the region and other developing countries in the past few years are promising for local governments but not without useful critiques for improvement. The evidence provides some lessons. First, LVC tools are more likely to succeed when conceived to solve a recognizable local problem than when they try to emulate some supposed good practice or are practiced sporadically. This seems to be a powerful condition strengthening the legitimacy of these land policies (Goytia,

Table 7.1 Property taxation systems in a select sample of Latin American countries

Decentralized taxation system		Centralized taxation system	
More decentralized model		Less centralized model	
More decentralized model		Less centralized model	
Tax rate	<p>Bolivia Determined by each municipality</p> <p>Colombia Determined by each municipality. Progressive and differentiated (includes social conditions) Rates 0.1 to 1.6%</p> <p>Mexico Determined by each municipality</p> <p>Ecuador Determined by local governments. Rate 0.025 to 0.5%</p> <p>Brazil Progressive and differentiated (urban and rural) rates determined by each municipality.</p> <p>Argentina Mostly determined by provincial governments. Decentralization has proceeded only in several provinces.</p> <p>Costa Rica Determined by the central administration. Flat tax rate of 0.25%.</p> <p>Peru Progressive rates determined at the central level. Scale according to property value. From 0.2 to 1% but low-value units are not taxable</p> <p>Chile Fixed by national law with a progressive scale of tax rates and a large non-taxable range of properties.</p>		
Tax Base and cadasters	<p>Determined by the subnational jurisdiction</p> <p>Property values defined according to homogeneous zones, using owner's information.</p> <p>Fiscal valuation based on the local cadasters in largest cities and valuation service provided by private institutions. Valuation yearly updated based on the CPI.</p> <p>Determined by municipalities but update of valuations authorized by states. Cadasters are local with low capacity/resources to keep them updated.</p> <p>Fiscal valuation (land plus buildings) based on local cadasters. Updated every two years based on owners' declarations.</p> <p>Determined by the national law but in practice based on market value. Local cadasters with higher costs of updating when cities become larger.</p> <p>Since 2006 the Law of Cadaster establishes a common base to update cadasters base on valuation for land and buildings.</p> <p>Cadasters and valuation determined by local governments.</p> <p>Valuation based on the <i>Consejo Nacional de Tasación</i> agency (<i>Servicio de Impuestos Internos, SII</i>). Cadasters does not reflect market value. Centralized cadasters (National Property Registry) with a suboptimal exchange of information with the municipalities</p>		

(Continued)

Table 7.1 (Continued)

Tax Collection	<i>Centralized taxation system</i>			
	<i>More decentralized model</i>		<i>Less decentralized model</i>	
	<i>More decentralized model</i>	<i>Less decentralized model</i>	<i>Less centralized model</i>	<i>More centralized model</i>
	Full collection and administration by municipalities with the surveillance of the central government.	Municipal. No central regulation of the tax, only jurisdictional coordination.	Local.	Local. Large local governments (collection) with independent tax agencies (Lima, Trujillo, Piura, Chiclayo, Ica and Huancayo). Tax incentives and Progressive rates. Lower costs of collection by online payment.
	59.8% of local tax revenues is from the property tax (2008). Clear relation between local tax and services.	28.2% of the local tax revenue is from the property tax (2008). Link between the local tax and services.	32.9% of the local tax revenue is from the property tax (2008).	66% (59.9%) of the local tax revenue on average is from the property tax in 2003 (2008). High dependence of national transfers as local resources.
Profitability		3.8% of the local tax revenue is from the property tax (2008).	8.7% of the local tax revenue is from the property tax (2008). Main property tax revenue concentrated in only 5 from 24 provinces.	52.4% of the local tax revenue is from the property tax (2008). No relation between the property tax and the provision of local services.

Sources: Elaborated by Goytia and Cristini (2019), based on Gomez Sabaini and Jimenez (2011); Sepulveda and Martinez-Vazquez (2012); Guerrero Díaz and Noriega Quintana (2015); De Cesare and Ruddock (1999); Ruhling (2005), using decentralization/centralization models of Bahl (2011).

2021). While the rationale of these instruments seems quite simple and fairly reasonable, many authors question why these policies have not been more widely adopted around the world and attempt to identify reasons for this lack of implementation. These include some of the instruments' drawbacks such as technical difficulties in measuring the increment in value generated by public interventions and its interpersonal distribution, the risks of high initial costs and implementation problems, and in some cases general public resistance (Blanco et al., 2017). Smolka (2013) points out that successful implementation demands management skills to deal with many complex factors (i.e., benefit valuation, allocation of tax burden, collection methods, etc.) and proper understanding of land market conditions. However, in the case of Latin American and Caribbean countries, a proper valuation and revaluation of land requires the authorities to incur set-up and operating costs that might be beyond the reach of most sub-national government tax administrations. Many times, the legal difficulties present an obstacle to their implementation less than the misunderstanding of public authorities with decision-making power of the instrument's potential returns (Smolka, 2013). Adding to that, it has been important in recent years to move the debate about land-based finance from ideology to a more technical exchange, based on the assessment of objectives and processes.

Second, critics expressed concerns over the possibility that the implementation of these tools could result in reduced affordability and availability of services. For example, when betterment contributions are used for urban infrastructure financing, it can lead to situations where municipalities require developers to provide higher-quality services than they would have otherwise or to situations where developers provide services that do not meet the needs of the communities (Mahendra et al., 2020). Although there is little evidence of studies that explicitly analyzed their equity impacts, a recent study highlights the neutrality of a land value capture policy implemented in Bogotá (Colombia) in 2004, revealing that the relationship between value capture and prices has been negative (Garza, 2019), which can provide additional support for lowered land values and better affordability in cities that are implementing these tools. Land policy instruments can lay a foundation for more inclusive urban redevelopment through the potential impacts of approaches such as inclusionary zoning and/or land base and fiscal instruments in promoting or mitigating displacement of original population, as explained in Box 7.1.

Box 7.1 Urban renewal: bringing inclusion with land policies that reverse displacement

Latin American and Caribbean cities have been in recent decades a laboratory of urban interventions and public policies on urban renewal. The goal of urban revitalization policies is to regenerate areas with deteriorated urban infrastructure or inadequate urban amenities and services. Special district designations are one of them. By incentivizing firms to locate in an area, these interventions are aimed to promote economic opportunity and real estate development through the proximity of new firms and residents. Thus, these interventions typically target areas that are distressed or underperforming, where underutilized spaces (particularly older industrial areas) are being re-imagined and remade. Still others are emerging to transform traditional exurban areas, which are intended to meet demand for more urbanized, vibrant work and living environments. Examples in Guadalajara, Monterrey, Buenos Aires, and Bogotá (Goicoechea, 2017; Thomasz, 2016) illustrate this type of urban policy. Revitalization interventions are not only costly but have opportunity costs and may promote unintended consequences, displacing existing viable businesses and long-term residents. There is evidence that suggests that the benefits of this type of public policy and the provision (in quantity and quality) of public goods are capitalized in the value of urban properties. Between 2008 and 2018, in the development of the Technological District

in Buenos Aires, Argentina, the value of m² in dollars grew almost 175%. This is higher than the average for all the city. Adding to that, these new districts may exacerbate inequalities when most of the incentives targeting new residents—rather than including the existing community—are capitalized in increasing real estate prices, thereby creating greater affordability constraints for existing low-income residents, especially for households in rental markets, affecting affordability. Less is known about what land policy instruments may be effective (or not) in mitigating population displacement following these interventions. In Colombia, Bogotá's Fenicia urban renewal plan offers an example of an innovative way of implementing an urban renewal plan in which different urban planning and land policy instruments, like a land readjustment and exactions, have been used in a novel way to minimize displacement of the original populations and promote inclusion (Pinilla, 2019). Some land policy tools, like selling building rights, can provide additional funding to be invested in social housing programs, as was the case of some urban operations in Sao Paulo. Moreover, inclusionary zoning has been included in some countries' legislation, such as the new Urban Development Law for Sustainable Development Peru enacted in 2021, which uses the planning system to create affordable housing and foster social inclusion by requiring market-driven developments to incorporate a share of over 10% of the units for affordable or social housing. These ordinances may be mandatory, meaning builders must participate to obtain permission to build, or voluntary in that they offer incentives in exchange for a builder selling at price-controlled rates. In exchange, the international experience shows that this tool can be complemented by the public sector offering several incentives, including fast-tracking of plan reviews and permits, reduced or waived fees, low-interest financing tools, cash subsidies and grants, and density bonuses (Calavita & Mariasch, 2010).

Source: Own elaboration for this chapter based on Goytia et al. (2019).

Third, the results from empirical analysis start to suggest that the prospects of mitigation of informal development in cities hinge on the quality of their land policy foundation, which underpins not only the relevance of their existence but also enforcement, continuous support, and quality (Goytia, 2021). Harnessing the nexus between land polices, infrastructure finance, and informality means that land management tools might enable major provision of urban infrastructure services and stronger inclusionary polices as revealed by zoning with affordable standards that can be effectively obeyed. Some preliminary evidence on the causal effects of implementing some of these land policy tools, like inclusive zoning (or ZEIS) or land-based financing, start to suggest that those can be relevant contributors to reverse the size of the informal land and housing markets in Latin American municipalities. Municipalities in which there is a coherent body of land policy instruments are better positioned to foster the size of their formal land and housing sectors rather than informal ones (Goytia & Pasquini, 2018). The existence of those instruments does not guarantee equitable gains for a city (Mahendra et al., 2020). Their effect and its strength might be different conditional on the instruments that are implemented, their level of enforcement, the years of continuous implementation, and the quality of the instrument. All over the region, many municipalities have those instruments in their national or local legal frameworks, but those are seldom enforced—either because when they are present, they have not been regulated, or because they are not consistently enforced. Colombian, Brazilian, and Uruguayan municipalities have on average, a larger number of instruments in each municipality, but the average level of enforcement is very dissimilar, the highest in Colombian municipalities. Adding to that, significant differences of implementation methodologies also exist when it comes to how the resources are collected (i.e., the administrative acts that originate their enactment, how the fees or charges are estimated, or who is excepted from payment); how resources are applied and to what public investments; their direct level of impact in the city; the areas that are

benefited providing infrastructure services or public goods, land, and housing; and whether those investments have an explicit aim to focus on certain groups of the population, such as lower-income households.

Under this scenario, in Colombian municipalities from the Bogota, Cali, and Valle de Aburra (Medellin) metropolitan areas, there is a positive association between the existence of a coherent normative body of land management instruments, the sum of instruments in use (exactions, land readjustment, progressive property tax, and betterment contributions), and the increase of housing units with water services and of good constructive quality in the municipalities that have adopted and enforced these instruments when compared with those that have not. For example, in the metropolitan area of Bogotá, the land occupied informally has decreased in a very significant way in the last 20 years. Among the instruments that could have the greatest impact on increasing the size of the formal land and housing market are the land readjustment programs and exactions, supporting the obligation to allocate part of the land from new developments and partial plans for social and priority housing, a central measure that is required to complement any housing finance program, and through participation in *plusvalias* (whose main destination is social housing). The quantitative impacts on the average annual increase of households with complete provision of services decrease when the quality of the instrument is weighted, which might suggest that the absolute benefit to mitigating informal land and housing development is lowered by the uses for which resources or in-kind payments are destined.

Exactions, when implemented in Bolivia's municipalities, display a positive relationship with the percentage of formal housing across municipalities that use the instrument compared to those that do not. Although small in its implementation scale, it constitutes a useful tool to increase the share of households connected to water services and with better quality of construction materials.

Brazil has pioneered the use of ZEIS, and there is a positive relationship between this instrument and the annual percentage increase of households with formal tenure when comparing those municipalities in which this instrument exists and is enforced with the municipalities where it does not exist. Formal tenure increases on average 1.5% annually when the intensity of its implementation is considered. The same effects are observed in the municipalities of San Salvador that zoned for some type of social inclusion zoning like ZEIS; the positive effect is associated with up to a 3.7% annual increase of households with formal tenure.

Even though these results are promising; more research is needed in relation to these dimensions of regulation. Realizing the developmental potential of urban policies therefore requires more systematic and concerted efforts to analyze these matters.

5. Conclusions and the challenges ahead

In the past few years, urban growth and changes in city structure have become relevant issues for public policy in Latin America and around the globe. The chapter documents a stylized fact with important implications for public policies that seek to improve the development of Latin American and Caribbean cities and the wellbeing of their inhabitants: cities in the region have a high population density compared to cities in developed countries but are also growing and extending, many times without the required infrastructures and public goods that development requires. Latin American and Caribbean cities will continue to grow and expand, with or without urban policy support. But the appropriate implementation of land policies can ensure that this urban growth drives economic productivity and better quality of life. A better understanding of land-use regulation and land policies is a precondition to realizing this goal, to encourage the benefits of agglomeration on urban living, and at the same time seek to promote equitable and sustainable urban development. This chapter aims to contribute to that understanding by offering a diagnosis of Latin American urban policies in a comparative context.

As explained in this chapter, approaches to land-use regulation are variable within cities and countries, reflecting the different national contexts of development. However, there are some common approaches to land-use planning across these cities. We have seen, for example, decentralized responsibility for land-use planning among municipal governments. That decentralization extends to the role of planning and development in generating land-based revenues at a local level through the implementation of different land instruments within the frameworks and guidelines many times laid out at a national level. Bearing in mind the significant differences within the region, the evidence suggests that there has been a great deal of innovation in land policies among the cities of Latin America and the Caribbean. And yet there is still much to be done to achieve desirable social outcomes to mitigate the enormous inequality in the use of land, infrastructure, and public services. One primary reason most cities in Latin America and the Caribbean have not been able to take advantage of their relatively high level of urbanization is inadequate infrastructure. In this context, population growth in Latin American cities has increased the incidence of informal settlements and low-income population living in peripheral areas, where housing conditions are precarious and access to quality jobs and basic services is limited.

At present, the land-value increments in many cities resulting from public investments in infrastructure or administrative changes in land-use norms and regulations are mobilized to finance the required public goods and infrastructure services. Many of the cities are using innovative land policy instruments for financing urban development projects with the potential to benefit a wide range of households. Cities are also establishing the selling of additional building rights to fund public improvements, for example, the OODC from San Pablo, mentioned previously. Exaction fees are required for some new developments to fund additional public services or public goods in return for specific approvals or permissions. Such exactions, which can take the form of cash, land, or other in-kind revenues (e.g., services, infrastructure, etc.), help with the upgrading of informal settlements or providing more affordable housing options for low-income households.

Additionally, many cities apply betterment contributions earmarked to fund public services and infrastructure. Some employ land readjustment, another useful tool that allows cities to set aside land in areas of interest for implementing basic infrastructure. The documentation of these innovations is highly relevant from a public policy perspective because they may constitute a major input for the development of organized urban growth and expansion while closing the infrastructure gap (transport, water, and sewage networks) between central and peripheral areas. Furthermore, land and property taxes continue to be an important local revenue source because they are levied on largely immovable assets, making them easier to target. In many Latin American countries, however, successful implementation of such taxes has been limited, and there is still room for improvements in the progressiveness of the tax rate, fiscal valuation and updating of cadasters, and the administration of tax collection to improve compliance (De Cesare, 2007).

As result of all these advances that the region has been experiencing, the evidence is starting to suggest that cities in which there is a coherent body of land policy are better positioned to provide public goods and services and foster the size of their formal land and housing sectors. However, reaching more equitable objectives is certainly very much conditioned on the kind of instruments implemented, their level of enforcement, the years of continuous implementation, and the quality of the instrument (such as how resources are obtained and applied, etc.). The evidence indicates that there is large untapped potential for cities in the region to increase the use of land-based finance and land management tools. At present, many Latin American cities are systematically engaged in efforts that are heading in that direction by enacting normative instruments based on these concepts. The evidence showed that there is space to increase these efforts. All over the region, other municipalities have those instruments in their national or local legal frameworks, and yet they are seldom enforced, either because when they are present, they have not been regulated, or because there's not sufficient administrative capacity or political will for consistent enforcement.

Given the need for extensive investments in urban services in many cities of the region, these instruments can be organized to target a larger group of beneficiaries of the public action. This also suggests that the kinds of land policy instruments may be important in terms of welfare and income distribution results. But all these land policy tools and infrastructure investments must be complemented by appropriate land-use planning and regulation that foster the supply of affordable land and provide space for mobility infrastructure and other critical facilities (shopping areas, amenities, and open spaces).

The rest of this conclusion outlines an agenda for future research. First, the analysis of the contents of regulation is still at a very early stage. The diagnosis presented in the chapter addresses the challenge of having to work with information which is scarce in the region and has limitations in terms of quality and space-time coverage.

All empirical analysis is, nevertheless, limited by the lack of more comprehensive information on land markets and land policies that would enable a systematic study of cities' urban structures and policy effects in the region and their evolution through time. This deficiency calls for the generation of new evidence that will allow for a separate analysis of the effects of specific components of the regulation, such as zoning, certain FAR or building restrictions, and transaction costs, to better understand the effects of regulation on land markets. Hopefully the evidence discussed in this chapter will encourage more comparative studies that will support evidence-based policies that promote inclusive and sustainable urban development. Adding to that, the present analysis should be complemented by a deeper analysis of the effects of regulation and/or land-policy instruments on housing prices and affordability. Metropolitan coordination of land use is another challenge for the megacities in the region with very fragmented administration. Some major city-regions, such as San Salvador, have responded to this challenge by coordinating metropolitan spatial urban policies. Finally, it is important to evaluate the Latin American and Caribbean experience in a wider, international context. There is further work to be done on translating the insights from land-policy implementation to different developing countries. It might provide an informative analysis of the most effective ways for cities to break the cycle of underinvestment and informal markets. The leaders of virtually all cities of the region want and need a better understanding of the impact of policy interventions and which ones can make the biggest difference for land and housing markets.

Notes

1. At the regional scale, development banks have issued reports highlighting the important role that LVC can play in meeting urban service and infrastructure needs (Abiad et al. 2016; Blanco et al. 2017; Suzuki et al. 2015).
2. In the late 1960s, they accounted for 46% of total revenues in Medellin. In Bogota, it rose from 16 to 24% of the revenues collected from 1960 to 1993.
3. In Ecuador, 74% of all betterment contributions are collected in its three largest cities (Cuenca, Quito, and Guayaquil), although they account for only 30% of the population (Rodríguez & Aulestia, 2013).

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Annex

GLOSSARY

Betterment contribution a charge or fee imposed on owners of selected properties to defray the cost of a public improvement or service from which they specifically benefit (known as a *special assessment* in the United States). It is the oldest instrument and has been adopted in almost all the municipalities in the metropolitan areas of Valle de Aburra, Bogota, Cali, Valle de Mexico, San Salvador, Sao Paulo, Belo Horizonte, Rio de Janeiro, Guadalajara, Cordoba, and Montevideo, but with varying levels of enforcement.

Building rights charges applied to recover the land value increment resulting from development rights over and above an established baseline. Their feasibility depends on the legal separation of building rights from land ownership rights. Now in use in many cities of the region, like Sao Paulo, Curitiba, and Buenos Aires, but with different implementation conditions (whole city or certain areas, base-line FAR equal to one or greater). Recently adopted in Peruvian new urban development law.

Certificates of additional constructive capacity (CEPAC) bonds issued by City Hall that give the bearer additional building rights—such as a larger floor area ratio and footprints and change uses in the plot—which are sold in electronic auctions on the São Paulo Stock Market Exchange (BOVESPA). They represent the economic compensation a developer gives the public administration for the new building rights received.

Exactions cash or in-kind contributions made by landowners to obtain special approvals or permission to develop or build on their land. These contributions may be stipulated through subdivision or development agreements based on a particular norm or expectation, or they may be negotiated by the government on an individual basis. Apply in many Bolivia's cities for improvements in low-income settlements.

Inclusionary zoning a particular type of charge that offers permission to build at a higher density in exchange for the developer contributing toward, or providing, affordable housing units. A particular version of this instrument is used in Santiago de Chile for supporting better inclusion in private housing developments. Peru's new Law for Sustainable Development is a pioneer in the region including a share of over 10% of affordable or social housing units in each new development in certain areas of the cities.

Land readjustments in-kind (usually land) contributions by all landowners in the area of a project to an entity that in turn uses (sells) these contributions to self-finance investment in urban infrastructure and services. Mostly adopted in Colombian cities. The evidence in Valle de Aburra's and Bogota's municipalities indicates that their implementation has benefited the lower-income population, such as in the Fenicia project in Bogota.

Property tax direct tax on real estate including land value. Property taxes are not usually associated with any public intervention and are levied on periodical bases in each jurisdiction.

ZEIS (*zones of special social interest*) zoning category used to earmark land for low-income markets based on underutilized and empty areas in central cities or for informal settlement upgrading. It can be considered an innovative use of inclusionary zoning implemented in Latin American countries. Widely used in Belo Horizonte, Sao Paulo, and other Brazilian cities, but also in San Salvador.

Source Own based on Alterman (2012), Borrero Ochoa (2013), Smolka (2013), Smolka and Amborski (2000), Goytia and Cristini (2017), Goytia (2021).

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