

# Value capture in Latin America: notable experiences <sup>1</sup>

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## The case for value capture

Conventional fiscal policies largely neglect the fact that the costs of providing urban infrastructure and services are public, but their benefits are private. Municipalities sit on a largely untapped source of revenue: land. Depending on the legal frameworks within which they operate, local governments have an opportunity to tap this major resource using a variety of land-based financing tools (LBFTs) to meet public expenditures as well as support spatial growth and promote greater social integration.

### Urbanization generates strong windfalls (especially in third world countries)

Landowners in Latin America often reap huge increases in unearned income from a variety of public projects or the easing of zoning and other restrictions.

- Consistently in the region as a whole, conversion of rural land to urban use typically raises parcel prices by more than 400 percent (Bouillon 2012).
- In São Paulo's high-end areas, the value that developers are willing to pay for the right to build at a floor area ratio (FAR) of two or three (rather than the basic FAR of one) is well over US\$500 per square meter (Sandroni 2011).
- 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 and Loaiza, 2006).

## Value capture – defined

The notion of value capture is to mobilize, for the benefit of the community at large, some or all of the windfall income that landowners gain from public investments and by changes in administrative norms and regulations that raise the value of their properties. Increments resulting from the landowners efforts are rather the exception to the rule...

The working definition of value capture encompasses three important components. First, it refers exclusively to increments in the value of the land that is changes in the

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<sup>1</sup> This paper draws on a the larger work by the author *Implementing Value Capture in Latin America: Policy and Tools for Urban Development*, Policy Focus Report, Lincoln Institute of Land Policy, June, 2013

value of the buildings, per se, are not to be charged or captured. Second, community effort generates land value increments in various ways, over and above any explicit public intervention. Land readjustment schemes (see below), for instance, may be promoted by a nonpublic entity with the resulting land value increment shared by the participants. Third, the term *mobilization of the land value increment* is proposed rather than public appropriation. The latter term refers to the conversion of land value increments resulting from a community effort into taxes, fees, and the like to be spent on services and public investments.

With regard to the generating factor for value capture policies and tools it may refer to current land value increment but also from public interventions occurred in the past or expected in the future. It is typically NOT charged before the beneficiary actually realizes the gain in the market, and more the corresponding payment may not be necessarily done exclusively in money, that is also in land itself or some public work.

Although these charges may often be collected in installments (e.g. often for betterment contributions) they are ad-hoc i.e. not permanent. Last but not least the objectives of the charges are not necessarily to raise revenues but to promote urban development, reduce speculative behavior and other.

### **Historic precedents in Latin America**

The region has a long history with value capture policies, with antecedents found as early as in the Filipines & Manuelines Ordinances of 16<sup>th</sup> century. In general, across all countries in the region and at different times, national or local legislation can be found to include provisions for some form of value capture. In the emblematic case of Guatemala, for example, Article 132, in the 1956 Constitution established that property owners who benefited from land value increments (*plusvalías*) as a result of public works were obligated to contribute an amount in proportion to their benefits. This stipulation was to be regulated by the Law on the *Plusvalías* Tax and Improvements Fees, which also had language regarding the social character of the benefits accruing to property owners. Similar language can be found in jurisdictions from virtually all countries in the region.

Although discussions on the need for more effective urban policies to include value capture provisos has started as early as the 70's in countries like Brazil it was from the late 1990's on that a significant number of new national acts enacted them. The most comprehensive ones setting the tone for many more recent such legislations were that of Colombia (Law 388 of 12997) and the Brazilian Statute of the Cities of 2001. Since then Uruguay approved new legislation in 2008, Ecuador in 2010. Peru is now in the process of sending its law (SEDATU) to the congress, while Guatemala and Chile are currently conducting high-level national debates on how the legislation should be formulated. In, 2012, the Law on Fair Access to Habitat enacted for the Province of Buenos Aires, Argentina, required the contribution of at least 10 percent of the land

value increment generated by large urban development's occupying more than 5,000 m<sup>2</sup>; a 50 percent increase in the property tax on vacant land; a special contribution on plots benefiting from zoning changes; and opportunities to readjust public land for social housing programs.

### **Recent popularization**

The reasons for its growing popularity are manifold: regional economic stabilization (e.g. transparency of non-operational costs with lower inflation), fiscal decentralization (re: transference of responsibilities); more progressive strategies for urban planning and management (better distribution of social costs and private benefits); re-democratization, increased social awareness, and demands for equitable public policy responses (higher legitimacy to public expenses) ; changing attitudes toward privatization and public-private partnerships; the influence of multilateral agencies (cf. relevance of public cost – recovery); and pragmatic considerations to capture land value increments to raise funds for local community needs (discretionary revenues from value capture tools).

### **Land-Based Financing Tools**

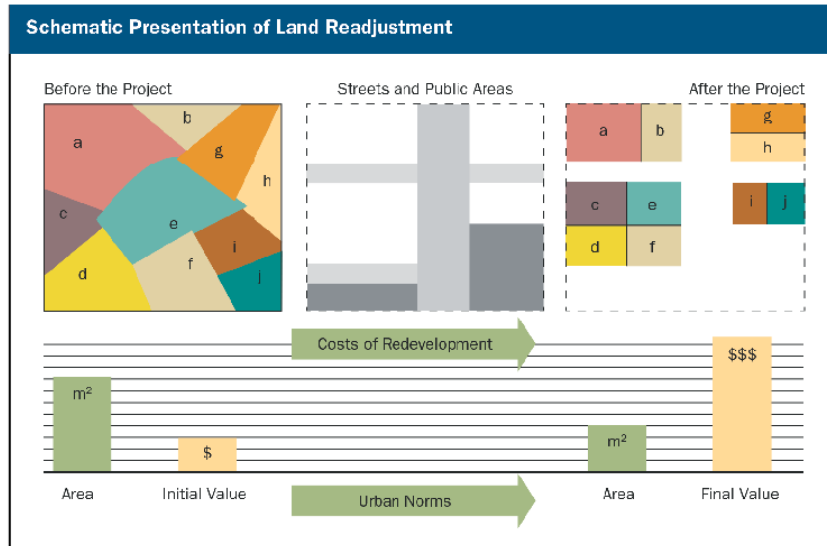
The range of land-based finance tools based on the concept of value capture includes:

**Exactions:** Exactions are cash or in-kind contributions and other types of charges for extraordinary building rights, with compensation negotiated directly with municipal authorities. Under the above referred Law on Fair Access to Habitat the municipality of Trenque Lauquen amassed about 102 has of land to urbanize. In combination with the funds from large scale urban developments it is now addressing the majority of its annual need for affordable housing.

**Land banking and Land leasing:** Under land banking, the municipality acquires and holds large tracts of land in order to control their use and prevent speculation. Upon sale or lease of banked land, the municipality captures the land value increment resulting from public investments or market forces. In the 1980s and 1990s the administration of Aguascalientes in Mexico, acquired land through expropriation and other negotiations to provide an alternative to informal occupations while at the same time imposing sanctions on subdivisions offered by pirate developers (Jiménez Huerta 2013).

**Land Readjustment -** This scheme requires contributions of land by local owners to an entity that then uses (sells) the contributions to finance the cost of infrastructure and services. These investments, in turn, increase the value of all properties in the area. Participants in land readjustment initiatives assume the risk that the increase in land values from urbanization will more than compensate for the reduction in their individual holdings. The Simesa project in Medellín, an area of about 30 hectares, owned by a former steel mill and other smaller factories was readjusted into a fully self-funded,

residential complex on 13 plots setting aside 37 percent of the land for parks, green zones, and streets. See diagram below:



Source: Created by Maria Cristina Rojas Eberhard (2011).

**Property Tax** - Any tax on land value is a form of value capture insofar as much of that value results from accumulated public actions and investments. It follows that the property tax captures some value increase since it applies to both buildings and land. To pay for a new 40 km subway line in Buenos Aires that would double the existing capacity, Law 23.514 of 1987 created a special fund with a 5 percent addition to property taxes from all city residents, plus another 2.4 percent surcharge for those residents within 400 meters of the stations (Cuenya et al. 2003).

**Transfer of Development Rights** - Transfers of development rights (TDRs) are in-kind compensation by the municipality to owners for constraints on building rights (e.g., historic preservation or environmental conservation), or when owners surrender some of their land for a public project such as widening a road, creating a park, or rehabilitating a slum. These rights can be sold to third parties or used directly in developments in predefined areas. The city of Porto Alegre used such rights as a 'municipal issued currency', to compensate property owners releasing part or the entire property to make room for a new avenue crossing the city.

### **Some notable experiences in Latin America**

What follows are other major tools, but with a set of illustrations from Latin America.

### **Betterment Contribution in Bogota Colombia and Cuenca Ecuador**

These charges or fees are imposed on property owners to defray the cost of a public improvement or service from which they specifically benefit. In the United States, these charges are known as special assessments. Use of betterment contributions came back into common use in Latin America, with over \$1.7 billion collected in the eight largest

cities in 2007–2012. Bogotá alone supported a public works program for 2005–2016 from contributions worth about \$1 billion (Borrero, Durán, Hernández, and Montaña 2011). In Medellín, betterment levies are paying for more than half of the road grid (Garcia Bolivar 2012).

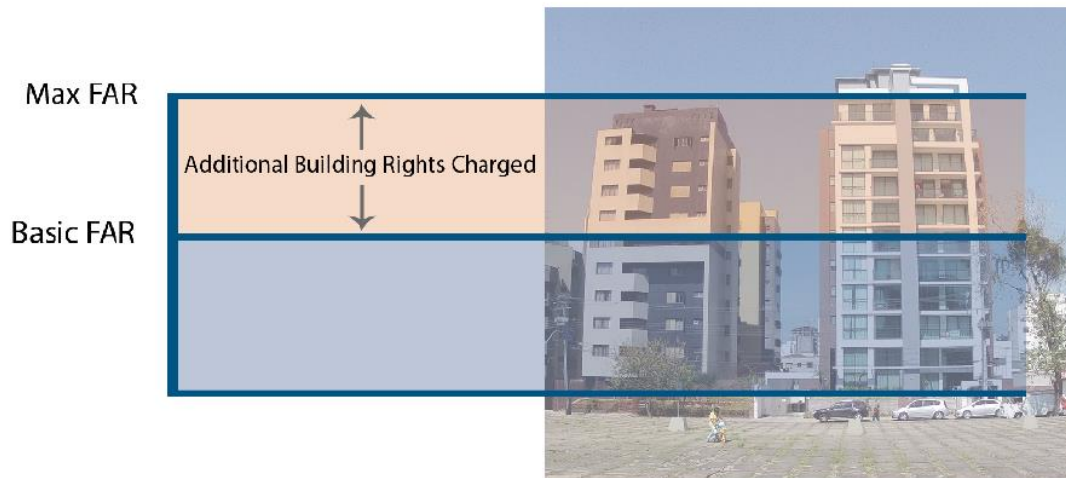
The municipality of Cuenca, Ecuador, over the last 10 years issued 1,800 contracts for public works projects and collected almost US\$200 per capita, much higher than Bogotá's US\$150 in the same period. In a the single year of 2010 it collected about US\$12.4 million, ) excelling in terms of performance, with 90 percent of households making their contributions in less than four years, 95 percent of the projects collecting 60 percent in betterment contributions, and only 3 percent of contributors found to be noncompliant

### Charges for Building Rights

Building rights charges recover the land value increment resulting from development rights over and above an established baseline. Over time, the charges have evolved from the more ad hoc manner of exactions into one where the fees are calculated according to predefined criteria and apply to all properties in the city or in a well-defined zone based on the master plan. The instrument that regulates charges for additional building rights in Brazil (*Outorga Onerosa do Direito de Construir*, OODC) is based on the notion that the landowner's right is limited to a basic floor area ratio and imposes a charge for the right to develop land at higher densities. It also applies to other types of changes yielding more profitable land use options, such as conversions from rural to urban uses or the rezoning of areas for renovation or commercial uses. In 2013, São Paulo distributed about US\$130 million in OODC payments to finance projects that included bus terminals, transportation corridors, parks and green areas, slum regularization, historical preservation, and drainage. (Maleronka and Furtado 2013).

In Curitiba, Brazil, the taller building on the left graphically illustrates the area above the basic FAR of about six stories for which building rights were charged. The taller building on the right also paid for additional building rights, but did not dramatize that fact in its

design.



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Since 2014, the basic FAR for the whole city of São Paulo has been set in 1, after a long transition since 2002 when the city initiated the process of reducing the existing FARs that varied from zone to zone from 1 to 3 to a now universal Basic FAR of 1, with the Maximum FAR ranging from 1 to 4. By reducing the Basic FAR in some zones allowing for the Maximum to go above the previous FAR (before 2002) of the zone, the city managed to split developers and land interests, thus practically eliminating major legal appeals to this initiative.

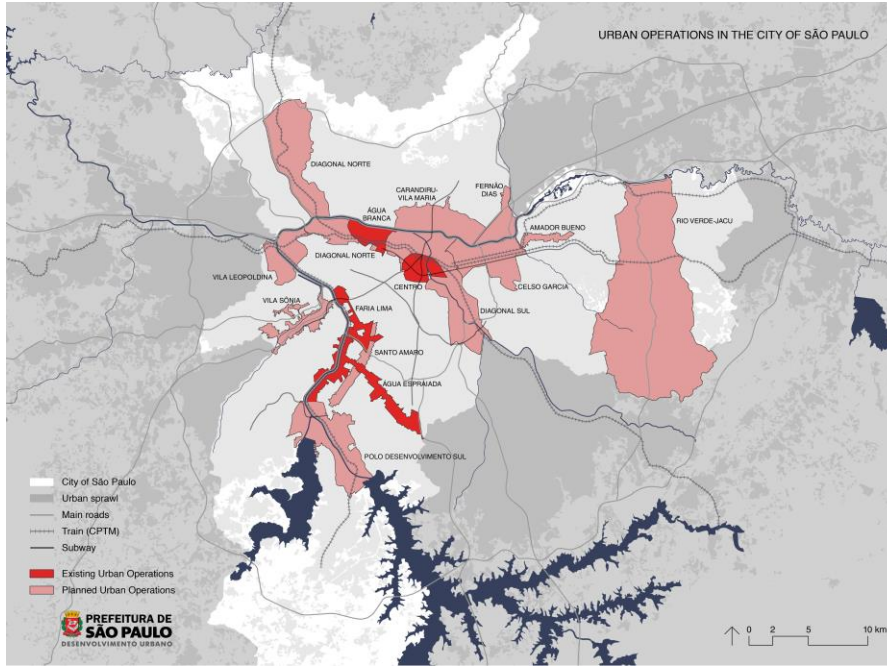
The legitimacy of the charge is grounded in two ideas: the implicit understanding that in order to support the additional building rights or higher land uses the public has to provide investments in urban infrastructure and services; and second, the principle that the public cannot favor one property over others when granting additional building rights or new land uses.

### **Auctioning Additional Building Rights: CEPACs, an innovative tool**

Brazil's Certificates of Additional Potential Construction Bonds (CEPACs) provide an ingenious solution for valuing additional building rights by basing the charges on the amount that developers are willing to pay in a competitive market. This was the case of the Brazilian innovation with Certificates of Additional Potential Construction Bonds (CEPACs). These are bonds issued by the Municipality, and regulated by the *Comissão de Valores Mobiliários* (CVM, the Brazilian equivalent of the U.S. Securities and Exchange Commission) that are sold by electronic auction in the São Paulo Stock Exchange Market. It was created in 1995, then sanctioned by the 'City Statute' (Brazilian Land Development Act) of 2001 and first implemented in 2004.

CEPACs are used in Urban Operations (UO), - that are delimited urban areas (polygons) subjected to zoning redefinition (land-use and density) supported by improved urban

infrastructure. It involves typically large scale areas in projects with building rights over and above the restrictions imposed by the existing Master Plan or Zoning Ordinances. The revenues resulting from the selling of such building rights must be fully reverted to the UO area in urban infrastructure, social housing etc. The following map illustrates the Location and sizes of the urban operations planned for the City of Sao Paulo



Auctions can be public to acquire development rights and private ones as a ‘currency’ to pay contractors. The face value of a new tranche of CEPACs offered starts with the realized value from the previous auction. Offered values per CEPACs in its 7 auctions for the Faria Lima UO started in US\$550 in 2004 reaching up to US\$2,100- in 2010 and in Agua Espraiada UO from US\$172.- in 2004 up to US\$636.- last one in 2012. The totality of the number of CEPACs offered was effectively sold in 8 out of the 15 auctions, and high premiums were paid in 9 out of these auctions. In only these two UO in the city it raised revenues in excess of US2,5 Billions! The total amount of CEPACs in an UO is predetermined according to what present and future infrastructure can support. Revenues in excess however can be invested in financial market- as up to 2013 it generated returns (interests) of about \$300,000,000. The following table provides a summary of the results from Agua Espraiada Urban Operation.

***CEPACs Authorized for the Agua Espraiada UO, São Paulo, (through January 31, 2013)***

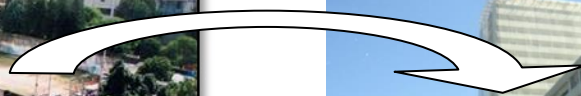
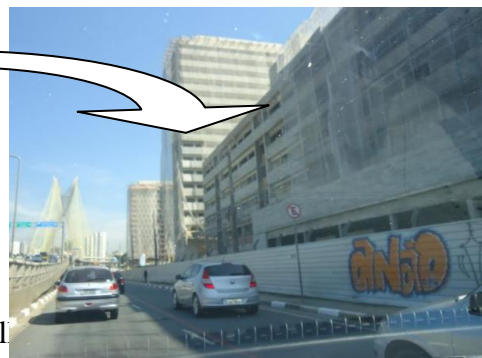
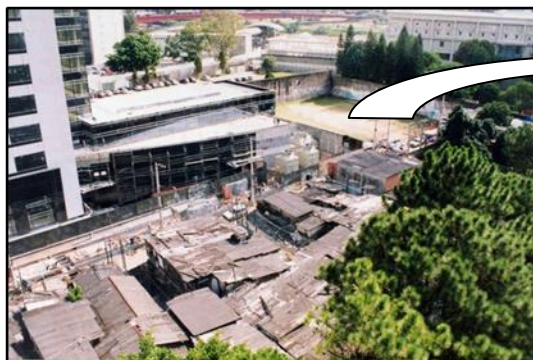
Authorized distributions by CVM	Number of CEPACs	US\$	US\$ per CEPAC (average)

<b>14/7/2004</b>	299,368	51,404,360	172
<b>10/1/2007</b>	317,781	65,304,996	206
<b>23/12/2008</b>	186,740	103,640,520	555
<b>5/9/2008</b>	1,099,880	386,461,945	351
<b>9/2/2012</b>	1,360,338	865,676,658	636
<b>Total</b>	<b>3,263,907</b>	<b>1,447,488,659</b>	<b>443</b>
<b>Private Offers</b>	127,092	25,664,266	202
<b>Grand Total</b>	<b>3,390,999</b>	<b>1,473,152,925</b>	<b>434</b>
<b>Used for a License / Completed Projects</b>	<b>-2,333,897</b>		
<b>Remaining in Circulation</b>	<b>1,057,102</b>		
<b>Total CEPACs</b>	<b>3,750,000</b>		
<b>Balance</b>	<b>359,001</b>		

*Source: Municipality of São Paulo, Secretariat of Urban Development*

These revenues have enabled these cities to defray the costs of transit improvements, but also of on-site redevelopment of a slum like Jardim Edith in one of the most expensive areas of São Paulo, as well as the construction of an iconic stayed bridge in the same city that cost over \$100 million

Jardim Edith slum residents were relocated to a new building in the same area using \$57 million in funds raised by CEPACs.





One of the main advantages of CEPACs is that auction overcomes, the difficult task of calculating the relevant land value increment. It also anticipates the funds for public administration to invest in urban infrastructure and services. The selling by 'tranches' allows monitoring and fine calibration of the market. The fact that it is earmarked reinforces developers' confidence in the system. In effect, there were no major legal appeals by them.

Although the most successful and longest standing cases are found in São Paulo, other Brazilian cities have issued CEPACs. For instance, all the building rights issued for the Porto Maravilha revitalization project in Rio de Janeiro's old port area were bid by a single buyer, the Real Estate Development Fund created by Caixa Econômica Federal (CEF), the Brazilian social and housing bank with funds it manages from the workers' pension funds. Law 101 of November 23, 2009 had authorized issuing 6,436,722 CEPACs for a total of 4,089,502 m<sup>2</sup> of additional building rights for US\$1.75 billion. The municipality of Rio de Janeiro thus obtained a substantial amount upfront to cover the costs of re-urbanizing that area.

CEPACs are also being used to partially fund the Linha Verde UO in Curitiba (Soffiatti 2012). This project involves the conversion of a major national highway, now engulfed by city expansion and cutting across 22 neighborhoods, into an urban avenue with the extension of a bus rapid transit line, new green areas, and higher-density land uses. For this \$600 million investment, a municipal decree in 2012 authorized the release of 4,830,000 CEPACs with a minimum initial price of US\$100 per CEPAC. The first auction in the São Paulo stock market in June 2012 attracted 18 bidders for the 141,588 bonds offered. A group of three bidders associated with the development of a shopping center acquired 70 percent of the CEPACs.

### **Contentious issues**

Critiques of LBGTs and value capture policies in particular rest on a set of theoretical, legal, political, and technical assumptions. In particular, opponents claim that LBFTs distort markets by increasing land costs and subverting property rights; that charges or fees levied to recover land value increments constitute additional taxes on an already burdened tax base; and that fairly assessing land value increment is difficult and, even if the fees can be properly calculated, revenue collection is not cost effective.

*Claim: A set of case studies does not prove the theory or legality of value capture.*

*Fact: Value capture is firmly grounded in urban economic theory and the legal principle that no one is entitled to unjustly earned income.*

Competition among developers leading to the “highest and best use” implies that there is longer room to transfer any additional charges on land to the final price of buildings. A principle long established since the works of David Ricardo and reiterated by land value tax experts as Oates and Swab (20093). Natural experiments to support robust statistical studies demonstrating that development charges are ultimately absorbed by the landowner are hard to find. But, by the same token, the inverse (charges being transferred to prices) is also true. There is evidence in recent studies such as Biderman and Batista (2015) reinforcing the theoretical claim that charges are capitalized on prices. Anecdotal evidence in support of the theory can be found in the case of CEPACs whereby landowners have not been able to incorporate the benefits of higher density into primary land prices. Moreover, developers in São Paulo have recently been issuing contracts with so-called ‘resolute clauses’ whereby payments to landowners are conditioned to the actual value they may have to bid for the needed additional FAR in the development. Note that most “evidence” on the need to hike prices to cover presumed “extra costs” comes from the developers themselves.

Land value increases resulting from public actions, such as allowing higher FARs in designated areas, fall into the legal principle that no one is entitled to unjustly earned income. This is true without even considering the public costs incurred from providing adequate services (transportation, water and sewage, open space) to meet more intense land use. Moreover under the equity principle the public sector cannot favor one citizen over another, meaning that, if public investments and regulations affecting land values are not uniform across a city, the government must take measures to redistribute the benefits and burdens of those investments and regulations.

*Claim: Development (building) rights are acquired rights.*

*Fact: Development rights are a public asset.*

Are building rights a private or public asset? If they are private, the implication is that changes affecting those rights and the utility emanating from them must be compensated. But government can consider development rights a public asset because its ability to use those rights depends on conditions established by the collective entity that the government represents. In other words, land use regulations are public conditions external to the bundle of landowner rights. In practice, this means that the public may “concede, confer, bestow” building rights at a price reflecting their market value. (This fact also resolves the claim of double taxation discussed below since one can only be taxed on what is rightly owned.)

A case in point is the well-managed transition done by the City of São Paulo over 12 years to reduce ALL basic FAR rights to 1 (one). By allowing the maximum FAR in some areas to increase above the original allowances say of FAR=2, they addressed developers interests with, say an FAR of 2.5, at the same time as landowners rights were reduced from a FAR of 2 to 1. This constitutes an exemplary case of how alleged ‘acquired rights’ were reduced without major legal appeals.

*Claim: Building charges are transferred to housing prices at the expense of households and the local economy.*

*Fact: Building charges fall exclusively on the landowner.*

Consider two similar plots (A and B) that are rezoned with the same maximum FAR of 3. The owner of plot A must pay a development charge for the difference between the original FAR of 1 and the new FAR of 3. Since the plots are otherwise equal, the highest and best use for both should be the same. How, then, would developers be willing to pay the same price for plot A as for plot B? Instead, they would simply ignore plot A until the land price drops to the level allowing the same profit margin as plot B. In practice however, special circumstances may justify some transference of such charges to final prices.

Developers would be pressured to transfer some of that burden from previously acquired land, into final prices. If the imposed building charge was miscalculated, in special above market values, developers would either wait for the administration to realize the error and correct the charge or develop the plot at a FAR that has no charge (e.g. FAR=1). Collecting new development fees may involve new bureaucratic procedures to clear the building license, thus adding to the cost of doing business. The announcement of new fees, with the proceeds improving infrastructure and services are quickly recognized by market agents - particularly landowners - as justification for increasing value of buildings in the neighborhood. Landowners may leave the market, temporarily reducing the land supply and adding to the pressure on prices. Last but not least, even in the absence of all the above, developers may allege that the new building rights charges force them to boost their prices—a tactic that they may use to demand more public concessions. All in all, these sparks of rising prices from development charges albeit significant tend to be but temporary (i.e an adjusting process).

*Claim: Charges on building rights distort the market and encourage gentrification.*

*Fact: The charges contribute to a more transparent, better-functioning land market.*

Windfalls, the object of LBFTs can be seen as an externality, which economists consider a primary source of market imperfections. Capturing the value of such gains is a tool to correct this market imperfection, therefore contributing to a better-functioning land market. The claim of elitism, in turn, runs aground in light of past practices, when much of the land value increment collected from development fees was simply given away, with no compensation to the community. One can only expect that future calculations of the public and private costs and benefits of development charges would better recognize the trade-off between higher public revenues and greater residential inclusion. If for no other reason, adding development charges to the planners' toolbox undeniably reduces the stakes of landowners in the land use bargaining table.

*Claim: Land value increments cannot be accurately assessed.*

*Fact: Effective methods for calculating land value increments are already in use.*

In theory, the value of land developed with a FAR of 3 compared with a baseline FAR of 1 should be the difference between the residual values of their respective highest and best uses. In practice, this is not so simple to determine because no two plots of land or development projects are perfectly comparable, and changes in certain plots affect the highest and best use of nearby plots.

The so-called “virtual land” method helps to resolve some of this difficulty. Take the case of a developer who wants to construct a 750 square-meter building in a zone where the basic FAR is 1 and the maximum FAR is 3. That developer could acquire a plot of 250 square meters, along with rights to build the additional 500 square meters on the same plot. For this additional floor area, the developer would pay the equivalent of two more plots of land with an original FAR of 1 in the same area now zoned for a higher density. The base value of land in the zone can be obtained from the city valuation maps used for property taxation purposes. Again, this is a proxy for the real value because conditions will change once the area is rezoned, but it does provide some consistency.

Another method for assessing the value of the higher FAR used in Bogota (Borrero 2013, 2015) is to multiply the differences in FARs by the value of the land per square meter. This value is the price per square meter of the finished units multiplied by the share of land in total costs. This method of calculation thus takes as fixed all parameters except for the difference in the FARs.

### **Concluding remarks**

Latin America has a long history with value capture policies to mobilize for the benefit of the community at large some or all of the land value increments (unearned income or *plusvalías*) generated by actions other than the landowner's, such as public investments in infrastructure or changes in administrative norms and regulations. Many countries, notably Brazil and Colombia, have passed explicit legislation regarding its use, but some jurisdictions have applied this potentially powerful financing mechanism to implement tools adapted to their local needs even without national legislation in place.

Although in most places revenues are still low, the applications of betterment contributions in Bogotá and CEPACs in São Paulo have generated revenues in excess of a billion dollars for those cities. At the same time, the broader dissemination of these and other instruments is often blocked by powerful stakeholders (notably landowners) and by opinion leaders (including academics) from both sides of the ideological spectrum due to a lack of understanding of the theoretical rationale and basic operational issues involved in the implementation of value capture policies and tools.

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## About the Author

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He graduated in economics from the Pontifical Catholic University of Rio de Janeiro in 1971, and received his MA and Ph.D. degrees in regional science from the University of Pennsylvania in 1980. He is a retired associate professor at the Urban and Regional Research and Planning Institute (IPPUR) at the Federal University of Rio de Janeiro. He co-founded and directed for two terms the Brazilian National Association for Research and Graduate Studies on Urban and Regional Planning (ANPUR), and was a fellow at the Brazilian National Council for Research. Contact: [msmolka@lincolnst.edu](mailto:msmolka@lincolnst.edu)

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