

There is also a massive gap between the funding needed to address the urban infrastructure deficit and what is available. In Section 1 - Part 1, we noted the scale of the deficit in Africa for the provision of water and sanitation. National public spending on infrastructure is very low across Africa. The relevant question is how this can be addressed so that most of the funding is dedicated to: operational expenses (and especially salaries); the capture of revenue by national, state-owned entities (such as utility companies and housing development bodies); limited direct lending to local governments for infrastructure projects; and constrained local revenue collection.

Raising Finance for LRGs - Land-based financing

For many LRGs, the finances that they raise from property taxes, service charges and public housing rents are significant sources of revenue. Even so, they are not usually sufficient to finance social housing interventions. **The potential of LRGs capturing the increase in land values created by urban expansion to expand local government revenue and help increase the supply of urban land for housing has long been recognized.** This has been recommended for decades now (in fact, it was one of the key recommendations that governments agreed to at Habitat I in 1976). At Habitat III, in 2016, discussions again optimistically highlighted the potential for doing this and, in particular, capturing land value, just as had been suggested at Habitat I, 40 years earlier. Strategic land use planning and public investment can shape urban form and expansion in ways that yield economies of agglomeration and scale for housing and for other forms of urban development. These can also provide the basis for land value capture and for other forms of land-based finance.

Land values and land availability for housing and related infrastructure projects are influenced by demand and supply, but the supply and price are also influenced by a number of other factors: investment in infrastructure (especially expanding city infrastructure to previously unconnected areas); land management regimes; the capacity of municipal authorities to tax land; and also the aggregated impact of private investment and the intrinsic characteristics of the topography and geography. Powerful real estate interests also influence the price and availability of land for housing, both within and outside the formal market, in most cities in the Global South. As we noted earlier, the financialization of housing has also contributed to higher housing prices and rents and to reduced tenure security, in many cities.

In recent years, there has been renewed interest in tapping rising land values as a source of municipal finance. LRGs are currently trying to, or considering, new land-based finance approaches to financing access to land for low-income households. Using land-based financing "...it is possible for local governments to marshal various instruments to capture this rising value with an eye towards long-term capital investment...they may collect revenue that they can use for urban investment, require direct investment from developers, or use the revenue stream to leverage the finance needed for larger investment projects (i.e. through borrowing).¹³⁶

It is important to differentiate between land value capture and land-based financing. Land value capture refers to a suite of instruments that allow the rising value of urban land to be leveraged by the state.¹³⁷ This capacity is further enhanced if local government bodies have control over urban infrastructure budgets and over planning processes (i.e. the ability to regulate development).¹³⁸

Strategic land use planning and public investment can shape urban form and expansion in ways that yield economies of agglomeration and scale for housing and for other forms of urban development.

136
Berrisford, Cirolia, and Palmer, 'Land-Based Financing in Sub-Saharan African Cities'.

137
George Peterson, 'Unlocking Land Values to Finance Urban Infrastructure: Land-Based Financing Option for Cities' (Washington DC, 2008).

138
Ian Palmer and Stephen Berrisford, 'Urban Infrastructure in Sub-Saharan Africa - Harnessing Land Values, Housing and Transport', 2015.

139
Global Land Tool Network,
'Leveraging Land: Land-
Based Finance for Local
Governments - A Reader',
2016.

140
Tony Crook, John Hen-
neberry, and Christine
Whitehead, *Planning Gain:
Providing Infrastructure
and Affordable Housing* (Wiley-Blackwell, 2016).

141
Crook, Henneberry, and
Whitehead

142
Gregory K. Ingram and
Yu-Hung Hong, *Value Cap-
ture and Land Policies* (Lin-
coln Institute of Land Pol-
icy, 2012).

143
Julie Kim, 'Handbook
on Urban Infrastructure
Finance', 2016.

144
Oscar Borrero Ochoa, 'Bet-
terment Levy in Colombia
Relevance, Procedures, and
Social Acceptability', 2011.

Land value capture seeks to quantify, collect and distribute the increase in the value of urban land that is attributable to state investment and regulation.¹³⁹ It is implemented through instruments designed to tax development value and applied through the planning system.¹⁴⁰

Land-based financing refers to a broader category of financing mechanisms that include land value capture and also contributions made by property owners and/or developers, regardless of whether land values are increasing or not. These are "designed to raise funds from developers to help pay for the infrastructure needed, on the one hand to allow their development to go ahead or to mitigate its impact and, on the other hand simply to pay for infrastructure requirements".¹⁴¹

In and around growing cities, development rights are valuable. When local government gives permission for a new urban development, the value of land is increased – and typically with very large increases, especially if this is on what was agricultural land. In Brazil, development rights are sold through the CEPAC (*Certificados de Potencial Adicional de Construção or Certificates for Additional Construction Potential*) bonds. These bonds are an urban funding instrument that combines value capture, development exaction and air rights sale (permitting higher densities). In São Paulo, the bonds are issued by the local government and sold via the stock exchange. This innovative product was conceived in 1995 in the Faria Lima Urban Operation, but it only began to operate in 2004, after the 2001 approval by *Estatuto da Cidade*, which included the CEPAC as an instrument that could be used in all Brazilian territories.¹⁴² The developer who bought the rights could then expand their floor area ratio, or change the land use (within the perimeters of the law).

Some municipalities in Brazil use CEPAC bonds as additional development rights on specially designated areas within their cities that need redevelopment. São Paulo was able to raise over RUSD1.6 billion (USD 800 million) for two small redevelopment areas in the first five years of their CEPAC bond offering. These bond proceeds represented almost 60% of the annual property tax revenues for the entire City. The proceeds provided upfront funding to build roads, transit, and affordable housing in the designated redevelopment areas.¹⁴³ While this tool has many important attributes such as raising large amounts of revenue, there is increasing debate on how the bonds increase property values and contribute to gentrification.

A betterment levy can help to capture the appreciated value of property post-infrastructure investment as well as funding infrastructure. This takes the form of a tax or fee assessed in a geographically bound area. In parts of the USA, this is a mandated fee.

Colombia is regarded as a country in which betterment levies (known as *contribución de valorización*) have been applied with reasonable success. According to a Lincoln Institute study, Bogota made about USD 1 billion worth of investments in public works from this levy.¹⁴⁴ In addition, eight smaller cities combined had obtained another USD 1 billion for public infrastructure and the collection of this fee has generally been accepted by taxpayers, though differences have arisen on how the charges are calculated. The levy has resulted indirectly in improvements in housing areas occupied by predominantly low-income groups who benefited from improved access to employment opportunities.

In South Africa, where the concern on the impact of this kind of contributions on income distribution is also important, there has been an increase of improvement districts through metropolitan municipalities. These improvement districts

generally are at precinct levels and impose a fee for increased security, lights, and other services.

Betterment levies function similar to Tax-Increment Financing in that there is a tax based on the incremental tax increase to land-values based on infrastructure investment. This is one of the primary challenges of implementing betterment levies - assessing the incremental value added to the land due to the infrastructural investment. This is an issue also for more advanced countries with robust property data and land records.

Providing public infrastructure may also include measures to capture increases in the land values that their provision creates. This could include, for instance, extending infrastructure to previously unserved areas, or providing it in, and around, public transport hubs. For areas that have been newly connected to infrastructure networks, or that are to be connected to them, very large increases in land values can be generated. LRGs should be able to purchase land in areas that are connected to city infrastructure at pre-development prices and then resell sites to developers at much higher prices once the infrastructure has been installed. This should also include serviced land destined for affordable housing for low-income groups. Of course, landowners will tend to oppose local authorities being able to buy their land at pre-development prices, but this problem can be avoided if provision is made to include them as stakeholders in the new development.¹⁴⁵

The possibilities of doing this have been explored for Mumbai.¹⁴⁶ A bus-based Rapid Transit System feeding a suburban railway station could provide new land for housing and extend the journey-to-work area in Mumbai. This would increase the supply of urban land which, in turn, would help to reduce land prices (or at least the rate at which land prices increase). This could provide well-located affordable housing for low-income families, and would also be self-financing. It would also be a way to overcome the opposition of landowners by making them shareholders in the larger project.

However, capturing a share of the increasing value of urban land is a political rather than a technical process.¹⁴⁷ This was evident in an analysis of the experiences of Addis Ababa, Harare and Nairobi, along with 29 other, more discrete, development projects undertaken in different parts of Africa. This highlights the need for the political will, commitment and capacity to share the costs of urban development with the property developers and landowners who benefit from infrastructure investment.

The local government of Addis Ababa uses the allocation and auction of leases and property taxes as mechanisms to release land value for development needs. The direct allocation of land to developers is the predominant instrument used to finance the provision of social amenities, public buildings and the release of land for lower-income housing projects.¹⁴⁸

In several Latin American countries, a range of urban development tools have been developed to draw revenue from land; these include instruments for capturing land value. This has helped to finance the provision of infrastructure and social housing for districts with few public services, as well as to carry out public works in general.

This experience with land-based financing is a reminder of how important it is to have a clear municipal plan for its implementation. In Colombia, for instance, Federal Law 388, of 1997, required all municipalities to draw up land or territorial plans. This Federal Law also included a chapter on Urban Value Capture,

LRGs should be able to purchase land in areas that are connected to city infrastructure at pre-development prices, including serviced land destined for affordable housing for low-income groups.

145
Patel, Saluja, and Kapadia, 'Affordable Housing Needs Affordable Transit'.

146
Patel, Saluja, and Kapadia.

147
Berrisford, Cirolia, and Palmer, 'Land-Based Financing in Sub-Saharan African Cities'.

148
Berrisford, Cirolia, and Palmer.

149

Oscar Borrero Ochoa, 'La Contribución de Valorización y Mejoras En La Experiencia Colombiana: Revisitando Prejuicios', in *Instrumentos Notables de Políticas de Suelo En América Latina* (Lincoln Institute of Land Policy, Banco del Estado de Ecuador, Ministério das Cidades (Brasil), 2014).

In most countries in the Global South, general taxation draws heavily on expenditure taxes, which are widely recognized to be regressive and therefore unfair to low-income groups.

150

Jin Zhu and Weicheng Tang, 'Conflict and Compromise in Planning Decision-Making: How Does a Chinese Local Government Negotiate Its Construction Land Quota with Higher-Level Governments?', *Environment and Urbanization* 30, no. 1 (2018): 155-74.

151

Zhu and Tang, 156.

including a set of instruments with which to do this. These included charging for development rights and for reclassifying land from rural to urban uses and charges for changing the use of a sector or an area of land. What is known as the Special Improvement Contribution is now one of the main instruments for taxing capital gains in Colombia. In the cities of Medellín and Bogotá, for example, much of the mobility infrastructure was financed using this instrument.¹⁴⁹

In Brazil, the Municipal Master Plan drawn up after the City Statute (Federal Law of 2001) began to incorporate instruments to capture real estate surplus value in order to finance different projects and housing policies. One of these instruments was the *Otorga Onerosa*, which landowners have to pay for the right to develop. The forms of payment of the additional construction rights vary from municipality to municipality and may be financial or physical, including the construction of housing units for the municipality. In São Paulo, the Municipal Urban Development Fund has channelled funds from the sale of construction rights into public investments in areas of social importance since 2002.

A review of the Municipal Master Plan determined that 30% of the funds raised in this way should be earmarked for the acquisition of land for social housing. Between 2005 and 2015, the total annual investment made by the city council using income obtained from this fund increased rapidly and eventually reached 16.3% of the total annual budget of the Department of Housing. However, two years later, in 2017, the size of the fund had fallen dramatically.

If local governments cannot find ways to retain some of the indirect returns from land development, they may not be able to finance the provision of public goods. Furthermore, if the costs of land development are not fairly shared between those who directly benefit from it, they will probably need to be met via general taxation. In most countries in the Global South, general taxation draws heavily on expenditure taxes, which are widely recognized to be regressive and therefore unfair to low-income groups.

In China, land-based financing, and particularly the leasing of land to property developers, is a major source of revenue for local governments.¹⁵⁰ Controlling the supply of land also offers local governments a way to assert their autonomy and demonstrate their legitimacy. However, the amount of land available for leasing is determined by higher levels of government and not necessarily determined using consistent formulae or criteria. "Decision-making on land use planning is highly politicized, negotiated and competitive in China, and it reflects the hierarchical system in administration."¹⁵¹

There are also other means by which land value can be captured for the public good. In a very different context, the public port corporation of Copenhagen took out a large loan, backed by the increase in the value of its land, to fund a large new development that included social housing. It also contributed to the costs of expanding the metro, which included building two new stations in the new development (see Box 29).

Box 29: Cross-financing housing and transport infrastructure in a large new development in Copenhagen

In Copenhagen, the Danish state owns a lot of land in areas suitable for urban development (particularly at the port and in a former military area), but it lacked the capacity to develop them. Copenhagen City and the Port Corporation (By & Havn), which is 95% controlled by the municipi-

pality and 5% by the Danish national government, developed Nordhavn: an ambitious new development, partly located on port land and partly on land reclaimed from the sea (using the material excavated while building the metro). Upon completion, in 40 to 50 years' time, this new site will house 40,000 people and offer the same number of new jobs.

With the money generated by borrowing against the land value of Nordhavn, the Corporation has been able to finance the new development and transfer USD 5.8 billion to the public company responsible for building the metro by borrowing against the (increasing) land value. This has contributed to the construction of the circular metro line and also to that of two new metro stops at Nordhavn, further adding to land values.

All the new buildings must meet the highest sustainability standards and 25% of the residential units will be destined for social housing managed by a social housing association. Those living or working within 50 metres of a metro station will have to pay extra. There is therefore a virtuous cycle: money is borrowed against the value of the corporation's land assets; part of this is used for development and another part is diverted to a fund for extending the metro system into areas in which the corporation has developed land; finally, the corporation will benefit from the increase in land values.

Source: Katz, Bruce, and Luise Noring. 'The Copenhagen City & Port Development Corporation: A Model for Regenerating Cities.' Washington DC, 2017.

If local governments cannot find ways to retain some of the indirect returns of land development, they may not be able to finance public goods. Alternatively, if the costs of land development are not fairly shared with those who directly benefit from them, then they are likely to be paid by general taxation. In most countries in the Global South, general taxation draws heavily on expenditure taxes, which are widely recognized to be unfair to low-income groups.

LRGs should also be raising substantial revenues from the sale of development rights, which are permissions that land-owners or developers need to build new developments, increase densities or change land uses. Proceeds from these can be used to fund other developmental purposes, including the expansion of urban infrastructure to previously unserved areas. LRGs can require one-off capital contributions to pay for all or a portion of the costs of providing the connecting infrastructure and sometimes public services to the new development. But one key reason why informal land markets exist is that landowners or developers can avoid these charges – along with not meeting building codes and regulations and not installing good quality infrastructure.

Public land leasing or sale can also be used to raise capital from un-or under-utilized public land parcels that benefit from public infrastructure installation (such as land around public transport nodes). In China, land-based financing – particularly land leasing to property developers – is a major source of revenue for LRGs.¹⁵² Control of land also offers a way for local governments to assert their autonomy and demonstrate their legitimacy. However, the amount of land available to lease is determined by higher levels of government and oftentimes not determined using consistent formulae or criteria. "Decision-making on land use planning is highly politicized, negotiated and competitive in China, and it reflects the hierarchical system in administration."¹⁵³

Many cities have substantial areas of land that belong to ports, airports and railway authorities and the military that could be developed based on the same principles as the Copenhagen example. Much of this land is in valuable cen-

152
Zhu and Tang, 'Conflict and Compromise in Planning Decision-Making: How Does a Chinese Local Government Negotiate Its Construction Land Quota with Higher-Level Governments?'

153
Zhu and Tang.

tral locations and so it could provide a valuable collateral for large loans. Like Copenhagen, it could contribute to local transport improvements, low carbon developments and social housing provision.

The challenges associated with efficient and equitable use of land-based financing include lack of market information, lack of critical powers at the local level, and undue influence on the decision-making process by landowners, land developers and other vested interests.

But there are a number of enabling conditions for land-based financing to contribute to local government revenue generation and infrastructure provision.¹⁵⁴ Of course, land-based finance depends on landowners and developers willing to work within this (and effective incentives/disincentives for them to do so). It also requires the existence of demand for property so that the increase in land value happens in the first place, as well as a responsive and flexible supply of urban land (without which increasingly demand will result in the growth of informal development and speculation as the constrained supply pushes up the prices of available land and property). As mentioned above, there must also be the political will at the local level and the capacity to implement, uniformly and transparently – and to overcome the opposition of land-owning elites. A functional planning system which includes a citywide plan for regulation of land and future development is also required to guide decision-making. Without a functional plan, it is difficult to charge for additional development rights or ascertain where future land value increases will be. Finally, a supportive national fiscal framework that gives local government the right to collect revenue or enter into contracts to support service provision is also necessary.¹⁵⁵

To ensure the delivery of more sustainable and affordable housing, LRGs need to tap multiple types and sources of finance and to interrelate synergistically at the local level.¹⁵⁶ The reasons for acquiring these resources include securing finance for recurrent municipal expenditure and for capital budgets dedicated to development projects and service interventions. This requires municipal revenue from local taxes, service charges and levies, subsidy budgets, private sector investment in development, and DFI and private capital grants and loans. Finally, financing obtained from household and community sources is also critical for maintaining a virtuous financial cycle through raising and repaying debt.

154
Palmer and Berrisford,
'Urban Infrastructure in
Sub-Saharan Africa - Har-
nessing Land Values, Hous-
ing and Transport'.

155
K. Moeti et al., *Public
Finance Fundamentals*, ed.
Kabelo Moeti (Juta, 2014).

156
Centre for Affordable
Housing Finance in Africa,
'Understanding Housing
Markets: Using Municipal
Data'.

There are a number of enabling conditions for land-based financing to contribute to local government revenue generation and infrastructure provision.

Community, city, national and international funds for local development

Over the last two decades, new or previously untapped resources have emerged as important contributors to more effective housing policies on the ground. These include community savings groups and their networks and federations - and the regional or national funds they have set up and co-manage. They include City Development Funds, many of which receive support from local governments. They include some national funds and some international funds that support partnerships between grassroots organizations and local governments.

In the past few decades, community-based savings groups and community development funds have emerged in many nations as an important new source of accessible finance for the lowest income groups - forms of finance which come wholly or partly from their own combined resources and which they manage themselves. Their importance is their capacity to serve and support those who