

URBAN INFRASTRUCTURE IN SUB-SAHARAN AFRICA – HARNESSING LAND VALUES, HOUSING AND TRANSPORT

Final report on
land-based financing for
urban infrastructure
in sub-Saharan
African cities



Chris Kitchin, MediaCitySouthAfrica.com





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Research managers (Department for International Development)

Lily Ryan-Collins, Rubbina Karruna and Phil Outram

Lead authors

Adjunct Prof. Ian Palmer	African Centre for Cities, University of Cape Town
Adjunct Prof. Stephen Berrisford	African Centre for Cities, University of Cape Town

Research Project leader

Prof. Gordon Pirie	African Centre for Cities, University of Cape Town
--------------------	--

Contributing Authors

Brendon Van Niekerk	PDG, South Africa
Brandon Finn	African Centre for Cities, University of Cape Town
Liza Rose Cirolia	African Centre for Cities, University of Cape Town
Nick Graham	PDG, South Africa
Assoc. Prof. Francois Viruly	Department of Construction Economics & Management, University of Cape Town
Dr. Sylvia Croese	Department of Sociology and Social Anthropology, University of Stellenbosch
Rob McGaffin	African Centre for Cities, University of Cape Town
Tsigereda Tafesse	Independent Consultant, Ethiopia
Prof. Peter Ngau	Department of Urban and Regional Planning, University of Nairobi
Dr. Innocent Chirisa	Department of Rural and Urban Planning, University of Zimbabwe
Sean Walsh	Webfresh, South Africa
Akin Olawore	Akin Olawore & Co, Nigeria
Bernard Tayoh	Independent researcher, Cameroon

Specialist advisors

Prof. Susan Parnell	African Centre for Cities, University of Cape Town
Adjunct Prof. Dave De Groot	African Centre for Cities, University of Cape Town
Adjunct Prof. Matt Glasser	Washington College of Law, American University
Prof. Julio Davila	Development Planning Unit, University College London

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E XECUTIVE SUMMARY

Background

This report is submitted to the Department for International Development (DfID) by the African Centre for Cities (ACC) at the University of Cape Town, as a final report and part of the 'Urban infrastructure in sub-Saharan Africa – harnessing land values, housing and transport' project. The ACC team is made up primarily of researchers

based in Cape Town but includes researchers from Angola, Cameroon, Ethiopia, Kenya, Nigeria and Zimbabwe. The research team's work has been strengthened by an international panel of reviewers and by constructive comments from DfID on earlier drafts of the report.

Key findings

The key findings of this work are that it is timely and necessary to promote the development and implementation of 'development charges' in sub-Saharan cities. Development charges is the term used here to describe a requirement that, in return for permission to develop land, a developer pays an amount of money to the relevant authorities to cover the costs of the infrastructure associated with the project. This does not start to share the unearned land value increment that is the target of many land value capture instruments, but represents a significant step forward in the context of the cities of the region. Two consequences emerge from introducing a system of development charges. Firstly, developments serving middle- and high-income groups 'pay their own way' and no longer consume public funds that are more appropriately directed towards land and infrastructure to serve low-income households. Secondly, it lays the foundations for developing more demanding instruments that share more equitably the land value growth flowing from the rapid urbanisation taking place in Africa. This report proposes that local governments adopt more robust and defensible legal and policy frameworks to ensure that, where developers provide infrastructure themselves (effectively instead of paying development charges), this infrastructure is provided in a

manner consistent with the city's overall infrastructure and development needs.

Achieving progress in the implementation of land-based financing is not just a technical or administrative exercise. It strikes at the heart of the political economy of property development, shifting the respective opportunities and obligations of both government and developers. Regulatory reform alone, for example, will not achieve sustainable land-based financing unless the reforms are designed to fit within the prevailing political and economic conditions. There are no short cuts to developing land-based financing for urban infrastructure in the region. More effective urban governance and using the land development process to finance infrastructure are two sides of the same coin: the one supports and makes the other possible.

On the technical level, however, national governments must develop and strengthen intergovernmental fiscal frameworks to achieve a realistic and practical national infrastructure investment framework, and local governments must prepare and approve city infrastructure investment plans.

Land-based financing

This project has examined the current experience of land-based financing of urban infrastructure in sub-Saharan Africa, evaluated that experience in the light of international literature and proposed an approach to strengthening the use of land-based financing in the region's cities.

For the purposes of this research, the term 'land-based finance' or 'land-based financing' includes land value capture; these terms are used internationally.

A useful definition of land value capture is the following (Suzuki et al., 2015):

Land value capture (LVC) is defined as a public financing method by which governments (a) trigger an increase in land values via regulatory decisions (e.g., change in land use or floor area ratio) and/or infrastructure investments (e.g., transit); (b) institute a process to share this land value increment by capturing part or all of the change; and (c) use LVC

proceeds to finance infrastructure investments (e.g., investments in transit), any other improvements required to offset impacts related to the changes (e.g., densification), and/or implement public policies to promote equity (e.g., provision of affordable housing to alleviate shortages and offset potential gentrification).

The term 'land-based financing' (LBF) is more inclusive than land value capture in at least four ways: (1) LBF includes arrangements that result in infrastructure being provided or financed by a developer; (2) LBF includes special assessments that reflect the cost of improvements to serve a property, whether or not these result in actual increases in the property's value; (3) LBF usually includes property taxes (expressly excluded from this report), which are the foundation of land value capture instruments such as tax increment financing; and (4) LBF would include transfer taxes imposed when land is bought and sold.

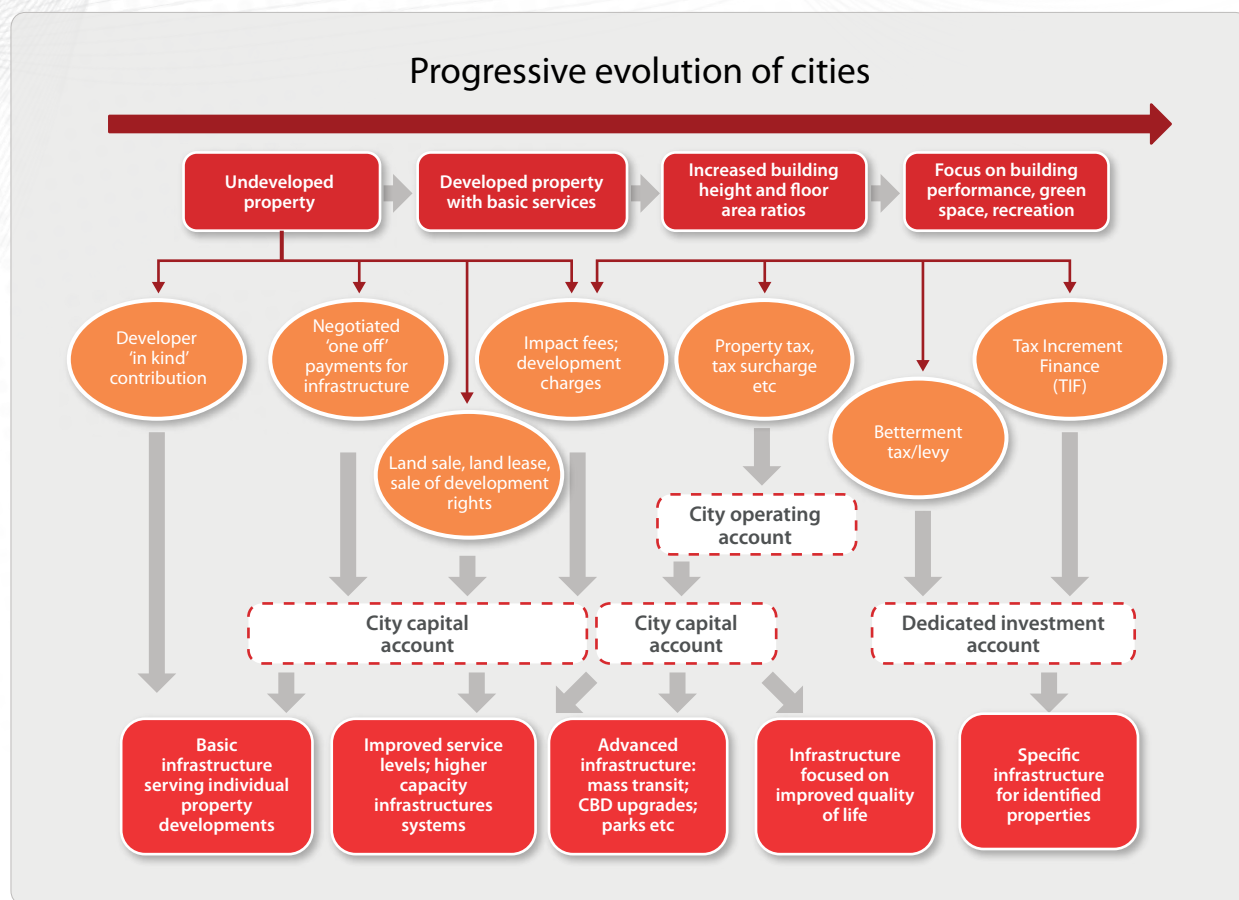
Conceptual framework

As cities evolve, their infrastructure needs grow and their capacity to pay for that infrastructure also grows. There is, however, an inevitable gap between the revenues a city can generate and the city's capital investment needs. This gap is vast in sub-Saharan African cities. Unsurprisingly, cities' infrastructure needs are correspondingly immense.

Theoretically, cities can use a number of sources in addition to land-based financing to enable infrastructure investment (e.g. own sources of finance, transfers and external service providers). In the region's cities, these options are not widely available, if at all. Own sources of finance are limited either by administrative and capacity constraints or by the absence of legal powers to raise them. Transfers from central government occur sporadically and are often unpredictable, due to political tensions between central and local governments. The partnerships needed to draw on service providers' sources of finance are difficult to establish. This is because of the twin constraints of poorly designed legal frameworks for

such partnerships (if they exist at all) and the lack of suitably capacitated private sector partners. Yet even in these cities that lack so many traditional sources of infrastructure finance, there is potential for land-based financing. This is built on the inevitable processes of real estate development, whether or not these processes are currently managed through formal regulatory processes.

Land-based financing instruments also allow for funding to be raised through increasing property rights or increasing the benefits brought by improved infrastructure. Some of these instruments are more effective for cities in 'survival' or 'basic services' mode, while others become effective as cities evolve and have more complex administrative arrangements in place to support them. Highly evolved cities have the ability to employ any of the land-based financing instruments. Figure 1 shows how land-based financing instruments apply across the property development and infrastructure provision spectrum.

Figure 1: Land-based financing instruments and city evolution

Conditions for land-based financing

The political economy of land development is a prominent feature of land-based financing in African cities. National and local state bodies compete for the political and financial advantages of managing urban development. Corruption is a pervasive theme running through almost all cities. In many countries, land is a politically volatile subject, reflecting the legacy of colonial dispossession and out-of-date, inappropriate land-administration laws and policies. Within this context, it is important to understand the conditions that will support effective land-based financing.

Land-based financing occurs as an integral part of a city's infrastructure, finance and regulatory processes. While individual land-based financing instruments can work even in cities where these processes are weak and fragile, they will work optimally in cities where the following preconditions are met:

- There is an effective **demand** for property, generated by the city's economy, as well as an effective **supply** of developable land, which is determined by the ease of access to land rights, the strength of the property developer sector and access to property finance.
- There is a sufficiently **effective state**, providing regulatory, governance and policy framework that is conducive to land-based financing, as well as **effective cities** with the legal status, political support, and financial and technical capacity to implement land-based financing.

It is no secret that few of these preconditions are met in most African cities. The challenge is to identify the minimum requirements that will make particular land-based financing instruments work in certain city contexts.

Experience in sub-Saharan Africa

A study of three countries (Ethiopia, Kenya and Zimbabwe) and a scan of 28 large-scale property development projects found that only very limited land-based financing is taking place in sub-Saharan Africa. Where it is happening, such financing takes the form of 'in-kind' contributions: installation by developers of the connector and (sometimes) bulk infrastructure needed for their projects to access services. In some cases, the city is able to leverage these contributions to serve a wider pool of citizens than the users of the developers' projects. While money does not pass from developers to the city, the city does receive infrastructure assets in lieu of financial payments. However, these assets may not be optimally located or contribute towards an integrated and efficient infrastructure network. In many cases, the city provides some or all of a project's required infrastructure, ostensibly to promote economic development, but effectively subsidising the developers. The city is generally left financially less well-off but may be able to recover the investment through future revenue from land-based financing mechanisms applied later, or by some other means.

Proposed interventions

Taking into account the realities in sub-Saharan African cities, this report proposes a relatively modest approach to building and strengthening land-based financing. The intervention with the greatest potential for relatively immediate, positive impact seems to be development charges, a one-off payment made by a developer when land-use changes are approved. These charges should cover the investments in connector, bulk and social infrastructure, over and above that required within the property development. Of these three, investment in connector infrastructure is likely to be the easiest to implement in the short term. In some countries, the

Ethiopia is the country in the region that has directed the most resources towards land-based financing; a task made easier by the state's control of land ownership, local government, and ownership of many of the country's banks. With these advantages, the Ethiopian state has generated significant land-based financing through the land-lease system in cities such as Addis Ababa.

Kenya and Zimbabwe are both countries that have legislated land-based financing, which in practical terms is underperforming to the point of non-performance, especially in Zimbabwe. Both countries have statutory requirements that developers pay towards the cities' infrastructure costs, but the money is not adequately ring-fenced and so is not spent on infrastructure investment.

Across the region, land-based financing has delivered minimal benefits for the urban poor who make up the majority of urban citizens. In fact, in many cases it has been regressive, where the state has financed infrastructure that in effect subsidises developments for the middle- and high-income groups, often in an attempt to boost local economic development.

introduction of development charges will be an innovation, but in others it will require the strengthening of existing instruments. In most of the countries where in-kind contributions to urban infrastructure are the norm, the value of these can be set off against a development charge, which means relatively few shocks when the system is introduced. Over time, a system of development charges will build the basis for cities to explore and implement additional, complementary land-based financing instruments. These instruments will start to share the land value increases created at least in part by of infrastructure provision.

Conclusion

The report highlights the need for improved arrangements for financing urban infrastructure, given how dysfunctional infrastructure systems are in so many sub-Saharan African cities. Using a fairly broad definition, land-based financing is being applied quite widely in the form of in-kind contributions by property developers. However, instruments conceived typically as some sort of tax or fee for infrastructure have been ineffective in creating infrastructure improvements. Overall, the scale of finance made available through these means, in relation to the need, remains small.

Yet there is potential to improve the financing of infrastructure through land-based financing measures. Development charges have a big part to play considering how rapidly cities are urbanising. As with any land-based financing instrument, though, the success of a development charges system will depend on how conducive the policy and governance frameworks are to its operation in a particular country or city.

The conclusions are negative in relation to the potential of land-based financing to fund infrastructure serving poor households. At best, land-based financing should be aimed at maximising funding for infrastructure to commercial and residential property for middle- to high-income households.

This will at least avoid having to subsidise infrastructure for these developments and hence release other funding sources for infrastructure for the poor, including slum upgrading.

It is, however, far-fetched to think that funding all middle- and high-income residential and commercial or industrial developments' infrastructure through land-based financing will result in enough money to finance infrastructure to support low-income development. Even with these measures in place, a severe shortage of funding for services to poor households will remain. Land-based financing, which ensures that property development for the well-off pays its own way and is not effectively subsidised by the state, is a necessary step towards freeing up finance for capital investment in infrastructure that serves the poor.



1

INTRODUCTION

This report is submitted to the UK Government – Department for International Development (DfID) by the African Centre for Cities (ACC) at the University of Cape Town, as a final report and part of the ‘Urban infrastructure in sub-Saharan Africa – harnessing land values, housing and transport’ project. The ACC team was appointed on 31 July 2014 and the project has run for 12 months. It is made up primarily of researchers based in Cape Town but includes researchers from Angola, Cameroon, Ethiopia, Kenya, Nigeria and Zimbabwe. As the findings developed, the research team engaged widely with outside stakeholders and with DfID. Workshops were held with DfID and academic partners in London, and with international urban development agencies in Abidjan. The research team’s work was strengthened by an international panel of reviewers, and by constructive comments from DfID on earlier drafts of the final reports.

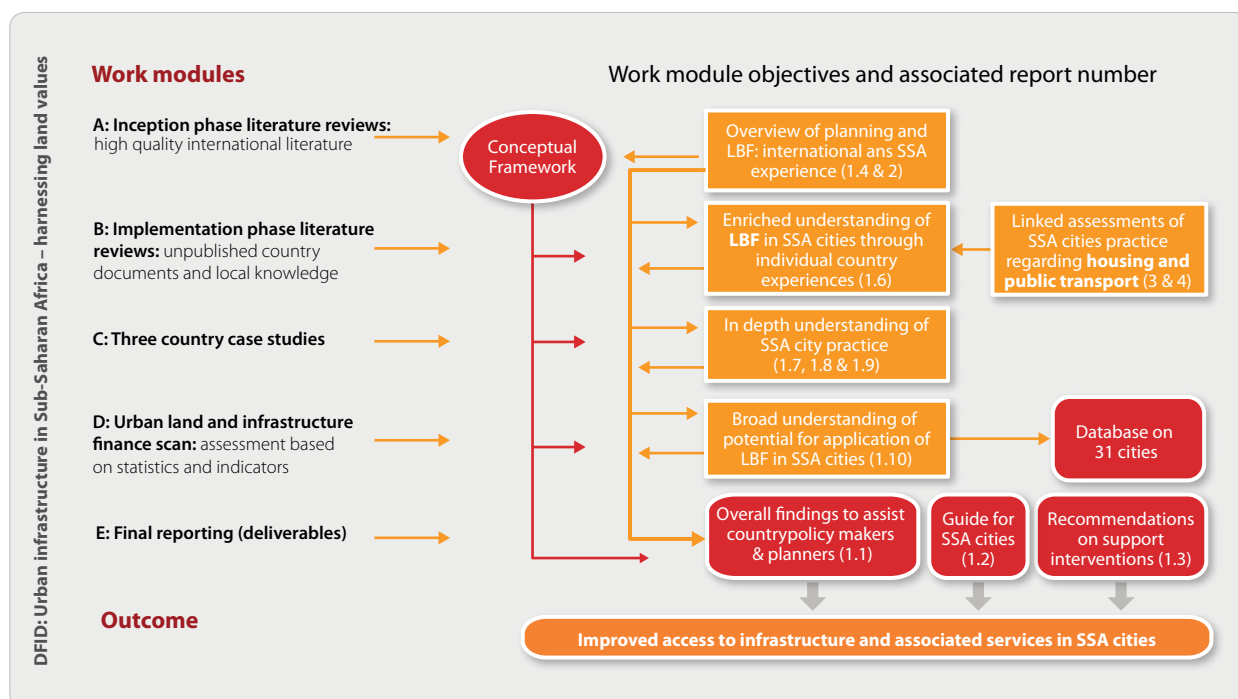
This report synthesises the key overall messages that have emerged from a wide range of studies and reports. Fuller explanations of many of the points raised in this report can thus be found in the other reports (see Section 1.1).

The report’s central objective is to address the question: “to what extent are public authorities in [sub-Saharan] countries proving able to use rising land values in urban areas to finance better, higher-capacity urban infrastructure?” This report looks at how the land development process can be used to finance urban infrastructure, while the other reports provide an overview of the project’s ancillary and complementary studies (Section 1.1).

1.1 Project structure

The overall structure of the project is shown diagrammatically in Figure 2.

Figure 2: Project structure, objectives and associated reporting



The overall project includes the following primary components (see report list at the end of this report):

- Research into land-based financing of urban infrastructure (Report 1 series).
- Literature review of planning and land-use regulation (Report 2).
- Literature review on housing (Report 3).
- Literature review on public transport (Report 4).

This report (Report 1.1) summarises the findings from the following work elements, each of which is covered by reports that inform this summary:

- Review of international literature on land-based financing of urban infrastructure (Report 1.4).
- Report 1.5 is a short summary of Report 1.1 in brochure form.
- Overview of property development experience in 16 sub-Saharan African countries, based on 28 'mini'

property development case studies (Report 1.6). This report is supplemented by short reports on each of the 'mini' case studies, which are not considered to be primary outputs from this research.

- Country case study reports for Ethiopia, Kenya and Zimbabwe (Reports 1.7, 1.8 and 1.9).
- Report on the scan of land-based financing potential in 31 cities, referred to as the Africa Land and Infrastructure Scan (ALICS) (Report 1.10). This report is supplemented by an interactive web-based database that contains the key data from the scan and allows data to be analysed to assess the potential of cities to apply land-based financing measures.

Reports 1.2 and 1.3 are companion reports to this report, dealing with guidelines for sub-Saharan African countries and proposed interventions by international development agencies.

1.2 Definition of land-based finance

For the purposes of this research, the term 'land-based finance' or 'land-based financing' includes land value capture; these terms are used internationally. A useful definition of land value capture is the following (Suzuki et al., 2015):

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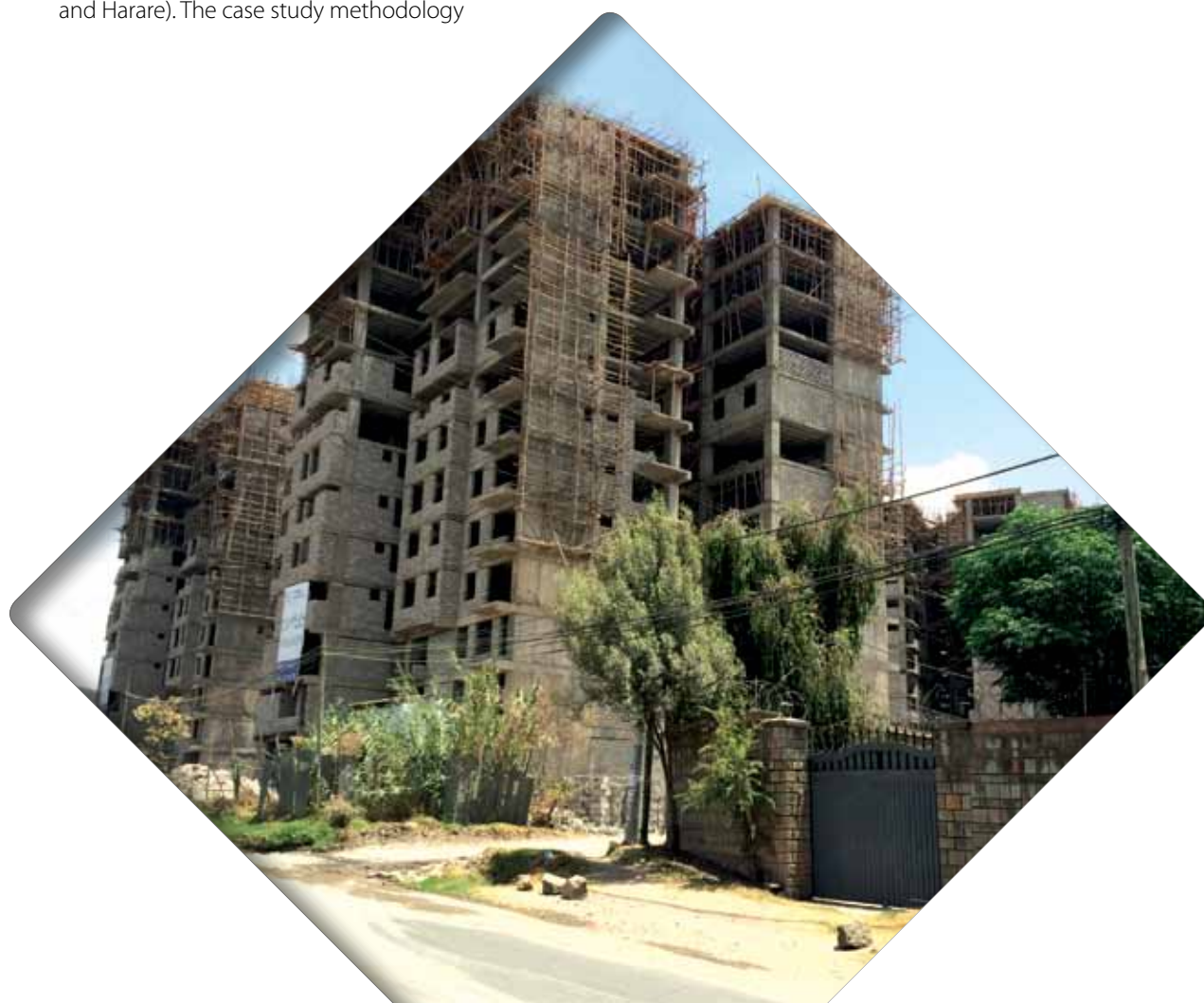
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3. LBF usually includes property taxes (expressly excluded from this report), which are the foundation of land value capture instruments such as tax increment financing.
4. LBF would include transfer taxes imposed when land is bought and sold.

1.3 Methodology

The methodology used can be summarised as follows:

- A review of the international literature on land-based financing and the context in which land-based financing takes place in sub-Saharan Africa. This review is based on published documentation.
- A conceptual framework for infrastructure finance, which draws on the ideas and experience of the authors, as informed by the relevant literature.
- 'Mini' case studies that assessed the experience of 28 property developments in 16 countries in sub-Saharan Africa. These case studies were selected based on the project team's country knowledge. Data was collected through news media, project publicity, written documents and limited interviews.
- Country case studies, selected through an engagement process with DfID. The intention was to include countries where there was evidence of land-based financing (Ethiopia and Addis Ababa); where there was evidence of considerable potential (Kenya and Nairobi); and where the state is considered fragile, implying a low level of potential (Zimbabwe and Harare). The case study methodology included the use of local documentation; interviews over a period of 2 weeks with people in national government, city administrations, parastatals and civil society; and the knowledge of a local consultant appointed onto the team.
- A scan of the 31 largest cities in sub-Saharan Africa, based on international datasets, to build a quantitative profile of these cities with a selection of indicators that have relevance for land-based financing. Where necessary, these datasets were supplemented by additional information on individual cities. The data was incorporated into an interactive web-based database (ALICS) which was developed specifically for the project to allow a multi-criteria analysis. Here the project benefited from the previous experience of team members on similar databases applied in South Africa.
- The reports were drafted by team members with specialists appointed to the team to review them and with additional reviews undertaken by a DfID-appointed panel of experts.



LITERATURE REVIEW ON LAND-BASED FINANCING¹

In the coming decades, sub-Saharan Africa is projected to experience ongoing and increasing population growth, economic growth and urbanisation, with consequent pressures on demand for land, housing, infrastructure and services. In this context the demand for infrastructure will grow rapidly, whereas the region is already experiencing a large gap between the finance needed and the finance available to provide the necessary infrastructure. Hence, new methods for financing infrastructure are needed.

2.1 Sub-Saharan African context

The infrastructure deficits in sub-Saharan African cities are well understood. Over 200 million people, or 62% of the urban population, live in slums, and poorly serviced areas continue to grow because of the high urbanisation rates. Sub-Saharan African countries are making progress with infrastructure provision, but this progress is insufficient to deal with the backlogs in access to basic services. For example, between 2005 and 2008 the proportion of people with adequate access to electrification decreased slightly, from 58% to 57%, but the absolute number of the population increased by almost 10 million. Adequate access to water in urban areas was low at 69%, while only 34% of people had access to sanitation. Of equal concern is the limited access to public infrastructure, such as public transport systems, parks and community facilities, which are central contributors to the quality of life in cities, as well as to their economic efficiency.

In looking at land-based financing instruments as a way of raising capital for infrastructure in order to improve access

Land-based financing has been used successfully in other parts of the world, particularly in the global north. It requires a functional land market² and sound urban infrastructure financing policies. These are the core focus areas of this literature review, which deals with the nature and dynamics of urban property markets in sub-Saharan Africa, and how they can provide a basis for funding urban infrastructure using various land-based financing instruments.

to services, key to success is a functioning property market providing opportunities across the price range. This requires sound policies and support from national governments, functional local governments, active private developers and an established finance sector. However, in much of sub-Saharan Africa, investment is being hindered by a poor and sometimes uncertain institutional environment, insufficient infrastructure, lack of business certainty and associated difficulties of doing business. Property markets are perceived to be too high risk to justify the rewards and are characterised by insecure land ownership arrangements, undeveloped financial markets, and insufficient data and transparency. Progressive improvements have, however, been seen in governance structures, the reduction of trade barriers and in political stability.

Nevertheless, international investors are identifying the opportunities for profit in African real estate markets, especially since the 2008 financial crash. Private developers are eyeing the potential of a rapidly growing African

1. This section of the report is a summary of the full literature review (Report 1.4) and individual references are not included. Readers who are interested in more detail and a list of references are referred to Report 1.4.

2. In some cases, notably China, land-based financing in the form of a land lease was used to initiate a land market that had not previously existed.

middle class and the consequent demand for residential, commercial and industrial property. It is precisely the lack of effective land-based financing or land value capture instruments that makes some real estate projects very financially attractive for global investors. An investor can realise, at least in the short term, substantial profits in places that have weak or non-existent state requirements

for developers to contribute to infrastructure costs or to share in the land value increases resulting from real estate development. Notwithstanding this, the development market in sub-Saharan Africa currently has insufficient active formal developers, and access to property development finance remains difficult in most countries across the region.³

2.2 Land-based financing instruments

Table 1 list the land-based financing instruments considered in this study.

Table 1: Land-based financing instruments

LAND-BASED FINANCE INSTRUMENT	DEFINITION
'In-kind' contributions	A developer constructs infrastructure external to the property development, as the city is unable or chooses not to provide this infrastructure. This maybe done under instruction from the city or as a voluntary contribution by the developer which should be in accordance with the city's infrastructure plans.
Negotiations and voluntary contributions	Before the investment takes place, a bilateral negotiation is used to determine a rate that property owners in the area of influence should pay for the improvement (Peterson, 2009).
Sale of development rights	The sale of the rights to convert rural land (agricultural or unzoned) to urban use and to build at greater densities than would normally be allowed by zoning rules or height restrictions (Peterson, 2009).
Public land leasing	If the relevant local authority owns the land, it leases the land out for a period of time, thus generating revenue that should ideally fund urban infrastructure (Peterson, 2009).
Land acquisition and resale	The public sector or relevant authority purchases and then resells the land around a development, thereby capturing some of the gains that an infrastructure investment may create (Peterson, 2009).
Land sales	The sale of public-owned, preferably city-owned, land, with the money being used to fund urban infrastructure (Peterson, 2009).
Impact fees and development charges	A one-off capital contribution designed to cover the costs of the bulk and connector infrastructure required for a new property development or property development improvements. These charges could also possibly fund other infrastructure not directly linked to the property development. The charges are based on a formula, so that they can be applied consistently to all property developments.
Property taxes, property tax surcharges and tax increment financing (TIF)	A tax levied on the value of property (sometimes including land) by the local government. A surcharge may be applied in some situations, such as if the property is in a business improvement district. Tax increment financing (TIF) allows municipalities to finance infrastructure development by earmarking property tax revenue from increases in assessed values within a designated TIF district (Dye and Merriman, 2006).
Betterment levies/taxes	Any tax or charge to a specific group of properties based on some measurable feature of the property such as frontage, area or value. It is based on the projected increase in the value of the property resulting from some public infrastructural investment or change in property rights presumed to be of general benefit to property values in that area (Adapted from various references).

3. Access to finance shows a positive trend, but this is off a low base

Other ways of applying land-based financing require rearranging parcels of land to optimise their value. This is referred to as **land readjustment** (not included in Table 1). In this situation, landowners pool their land for reconfiguration and reconstruction, and potentially contribute a portion of their land for infrastructure, or to raise funds to defray infrastructure costs. Some of the land may also be sold to generate

additional funding and may be contributed towards streets and parks.

Each of these instruments has specific benefits and constraints, with those towards the top of the above table having the most potential for application in sub-Saharan Africa. The relative merits of specific instruments are discussed in Sections 3.4 to 3.6.

2.3 International experience

The considerable literature on international best practice with regard to land-based financing include:

- The use by Colombian cities of ‘contribución de valorización’ to fund infrastructure projects. This is essentially a betterment levy charged to landowners and based on the increased value that accrues to their properties because of public works in the vicinity. The use of this instrument in Colombia has declined recently, largely as a result of local authorities accessing alternative sources of infrastructure finance.
- The Outorga Onerosa do Direito de Construir (OODC) used in São Paulo (Brazil) is a regulatory instrument used to administer building rights within the city. The OODC requires those who receive building rights from the government to pay a levy, which is used for public sector investment. The OODC is used where the city government has issued a ‘certificate of additional development potential’ (CEPAC) for a part of the city, a certificate it is entitled to issue in terms of national legislation. This effectively allows city governments to sell development rights by auction, which has raised considerable revenues in many Brazilian cities, especially São Paulo.
- Mexican municipalities are entitled to collect fees from property owners once land has been developed and improvements have been made to properties in their districts. This was applied mostly during the 1980s and 1990s and was only partially successful due to high levels of non-payment.
- Shanghai (China) used land sales to raise funds for infrastructure development. This was done through prepayments made by future users of the land, as well as the sale of already developed land. China has also successfully used land-based financing methods through its urban highway construction policies, facilitated by the fact that all urban land in China is owned by the respective municipal governments.
- Fee-based development charges are applied in numerous places in the developed world, with explicit policies found in Australia and the United Kingdom (UK). In the UK, several local authorities have implemented a ‘community infrastructure levy’ (called a Section 106 payment), whereby new developments will contribute to the local infrastructure. The rates are set in consultation with local communities and developers. In Australia, the development charge has been one of the fastest growing sources of revenue for local government, increasing at an average rate of 8.2% per annum over the period 2001–2009 (Master Builders Australia, 2009).
- In India, a number of states are seeking instruments to supplement the commonly used ‘area based development charge’, with few achieving sustained success in this endeavour. Tax-based development charges are being proposed for general use by local government in India in the form of an Urban Infrastructure Benefit Tax (Phatak, 2013).

2.4 Policies

The sound policies necessary for a functioning land market have received considerable attention from major multilateral and regional institutions and think-tanks. Their strategic focus on Africa is of importance for this review, as well as their underlying principles on land, including land-based financing, and any programmes that relate to land-based finance. The key policy points relating to land-based financing can be summarised as:

- the importance of infrastructure provision and the opportunities that property development offers for the financing of infrastructure
- the possibility of shifting the tax base from income to land
- the autonomy that should be provided to local government to raise taxes from the property sector
- the role of land markets in influencing economic outcomes, and the distribution of the costs and

benefits of land development between rich and poor

- land-based financing used to finance infrastructure and redistribute resources to poorer neighbourhoods

With regard to infrastructure provision and associated finance, policy positions focus on:

- empowering local government to have control over infrastructure and infrastructure finance, including adequate revenue instruments
- bolstering and modernising infrastructure finance tools, including better access to credit and application of land-based financing measures
- enabling endogenous financing by local government through their ability to raise debt finance, engage with private partners and manage land-based financing arrangements

2.5 Lessons for sub-Saharan Africa

Key lessons can be abstracted for application in sub-Saharan Africa from both international examples and policy positions reported in the literature. An important message emerging from an evaluation of international experience and from practice in the region is that the implementation of land-based financing instruments cannot be separated from the political economy of a particular city and country. The alignment of political forces between national and local government is a major determinant of whether or not national legal and policy frameworks support city-level land-based financing. Similarly, the patterns of land ownership and control are an integral factor in establishing the degree to which government bodies are able to extract financial contributions of any kind from powerful players in the real-estate sector. Taking into account the importance of political and economic considerations, the elements listed below reflect the ideal contextual factors that will determine the degree to which land-based financing systems can evolve in sub-Saharan Africa:

- a. The necessary governance systems and tools to manage land development processes, or at least

major land development projects, and to regulate the operation of emerging urban land markets must be both in place and followed or used.

- b. Sufficiently clear policy, legislative and governance support for local government to manage the land development process must be provided by national government.
- c. Sufficiently well-established developers must exist who are able to access finance to cover the cost of property developments, noting that they could come from both the private or public/parastatal sectors.
- d. Sufficient certainty about land use, which is based on a credible city planning framework combined with the ability of local government to manage the property development process.
- e. Local government must have a degree of control over land development, either through owning the land or having established powers of land-use regulation, in order to be able to grant development rights through a regulated system.

It should be noted that these findings emanate largely from research in the high- to middle-income countries. For cities in low-income countries, which often have weak administrations, these ideal circumstances are seldom likely to occur.

Furthermore, successful delivery of infrastructure financed through land-based financing mechanisms will depend on the capacity of local government – and institutions mandated by it – to design, construct, operate and maintain the infrastructure and resulting services.

Land-based financing will be constrained if the contextual factors listed above are absent or inconsistently present.

That said, the requirements for other forms of infrastructure finance, besides transfers from national government and donor funding, are also considerable. International experience suggests that land-based financing options can, by comparison, be relatively easier to apply than pursuing these other options. The biggest risk is probably that land-based financing mechanisms may lead to a skewing of access to infrastructure, with infrastructure for poor households being neglected in favour of servicing non-residential and higher-income residential property owners. There is also a considerable risk that, in contexts of weak governance and a low level of rule of law, corruption will become a significant factor that weakens land-based financing.

2.6 Applicability of land-based financing in sub-Saharan Africa

Access to capital finance is a critical constraint in providing and improving infrastructure. In the past, cities have relied heavily on transfers from national government and contributions from donors. However, future success is clearly dependent on cities raising their own capital finance. The traditional strategies of using surpluses on operating accounts and debt finance have severe limitations, as they depend on local authority financial viability, which is heavily constrained in sub-Saharan Africa. Therefore, innovative measures related to property development and the associated capturing of value from property need urgent attention. This underscores the importance of this DfID initiative to support policy-making and good practice with regard to the use of land-based financing instruments. Strengthening cities' capacity to collect property tax revenues will also significantly improve their capacity to access capital finance.

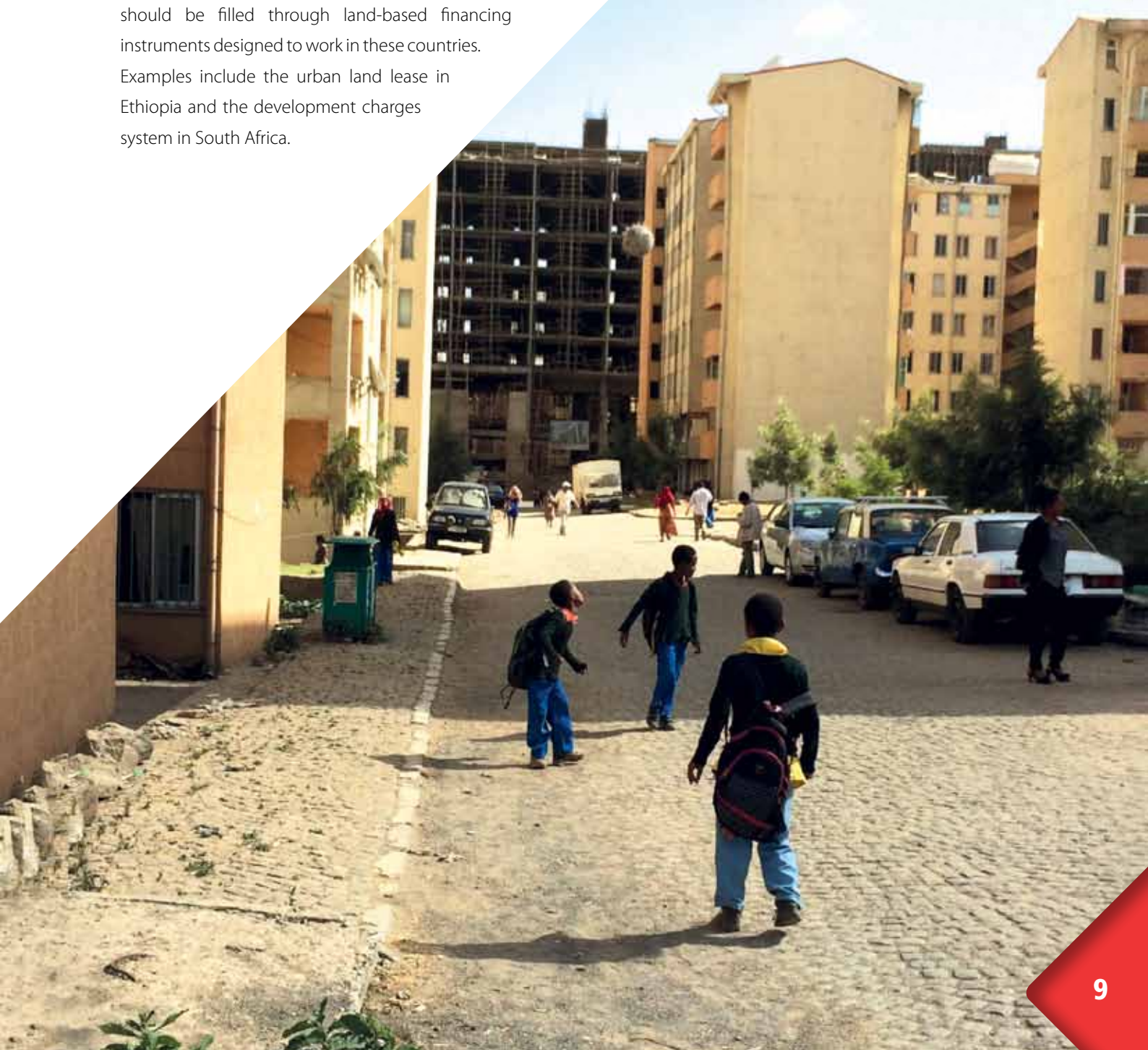
Property markets need to be effectively governed. Although generalisation is difficult, property markets in sub-Saharan Africa are typified by a spectrum of market

arrangements (incorporating both formal and informal elements), evolving land tenure arrangements, weak financial regulatory environments, and land management systems that try to meet a range of complex, and sometimes contradictory, objectives. Moreover, the poorly developed valuation profession in sub-Saharan Africa implies that property values are often difficult to assess. This constrains the banking sector's ability to support the market through the use of properties as collateral.

The region has had limited success with regard to urban planning, and considerable progress still needs to be made in developing the planning systems that can support the evolution of land-based financing instruments. Nevertheless, increasingly, local initiatives have started to yield more encouraging lessons for the rest of the region. Equally significant is the local government's control over land, and many sub-Saharan African countries are facing difficulties, such as land being controlled under customary laws, especially in rural and peri-urban areas.

Land tenure arrangements have a major impact on the way the market functions. Different land-based financing instruments will work in relation to different tenure systems. A challenge for sub-Saharan African cities is to identify those instruments that can work when land rights may not be formally protected but effective tenure security does exist. Experience in the region shows that where land for property development is in demand, developers are normally able to strike a deal with the holders of the rights to that land. Where the land rights system lies outside the formal land governance system, applying land-based financing instruments is more difficult in such a case.

Finally, with regard to current practice, infrastructure finance instruments related to property development and associated land-based financing have not been widely applied in sub-Saharan African countries. This is clearly a gap that should be filled through land-based financing instruments designed to work in these countries. Examples include the urban land lease in Ethiopia and the development charges system in South Africa.



3

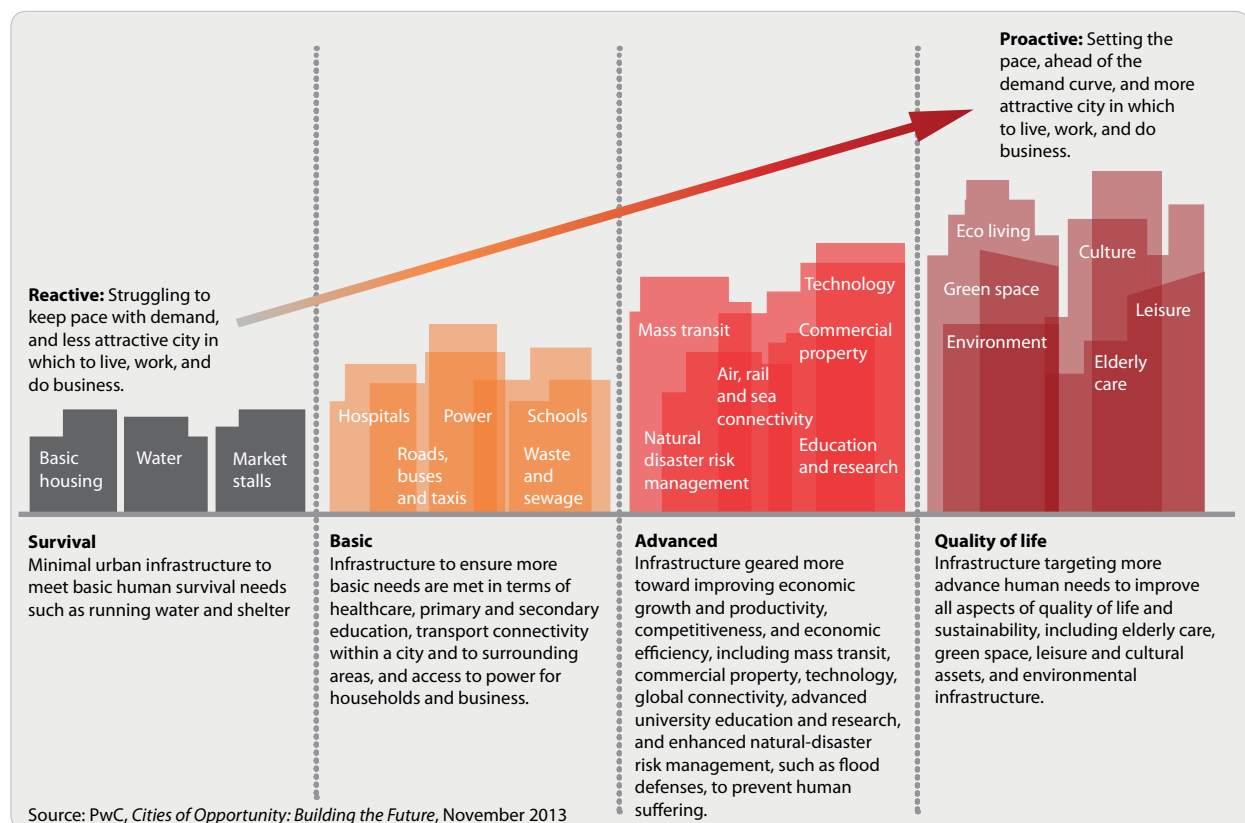
CONCEPTUAL FRAMEWORK: LAND-BASED FINANCING FOR URBAN INFRASTRUCTURE

3.1 Evolution of cities

Cities evolve over time, as they grow physically and economically, and gain increasing control over the management of the services that allow them to function effectively. This transition is illustrated in Figure 3, which

shows the progressive evolution of cities. Different parts of individual cities may progress in different ways, but the broad concept of the evolution of a city is nevertheless relevant.

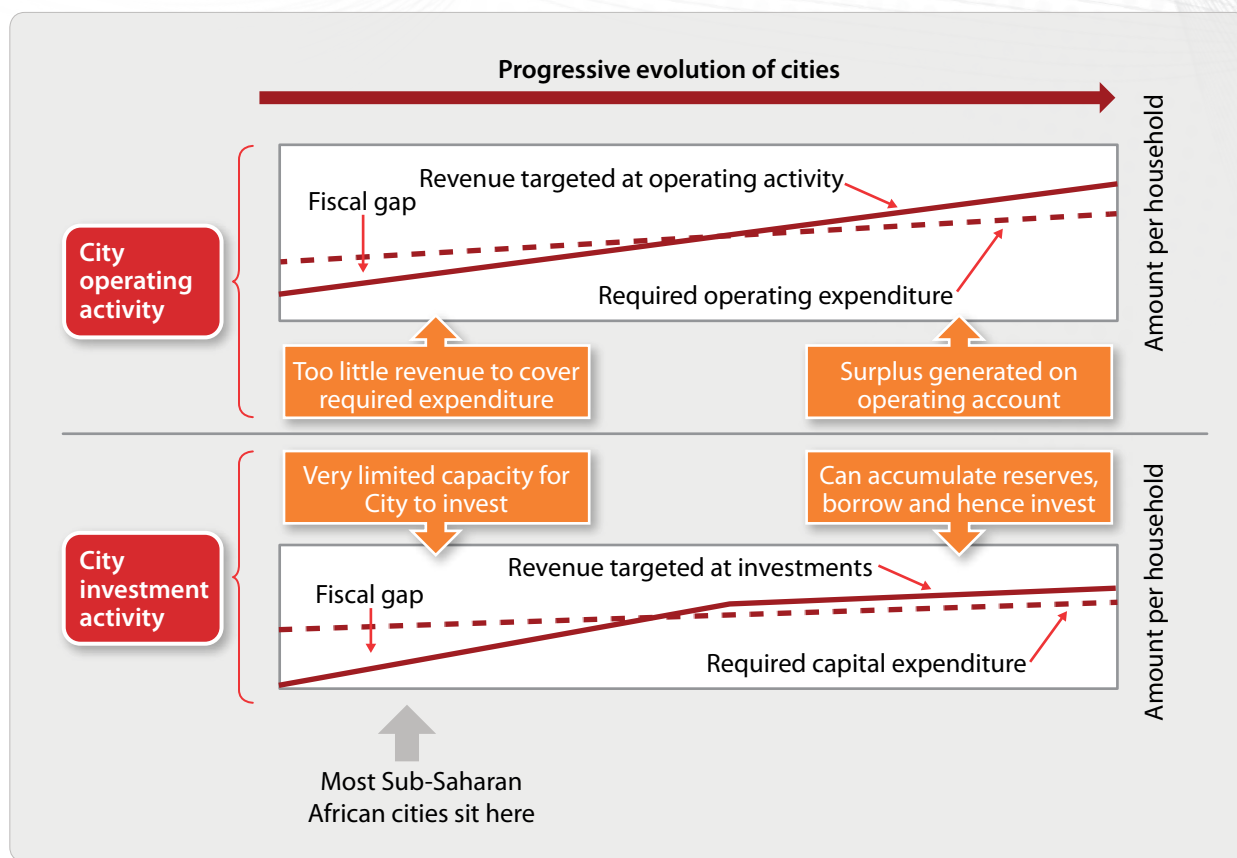
Figure 3: The evolution of cities



The way in which cities finance their service provision activities is changing. This is associated with the physical evolution of cities (as illustrated in Figure 3) and aligned with the change in property configurations and the nature of urban services.

Figure 4 shows the transition in how cities finance their operating activity (the costs of day-to-day governing the city, and operating and maintaining the infrastructure and associated services provided by the city) and their investment activity (primarily the capital works required to renew existing infrastructure and provide new infrastructure).

Figure 4: The financial viability transition of evolving cities



In the case of **city operating activity**, providing the expected service ‘package’ for a specific city incurs costs. These costs will vary depending on the city’s level of evolution and the specific mix of functions which the city is mandated to undertake (albeit not consistently legislated). Costs will depend on (1) the level of service which the city chooses (or is required) to provide at a particular stage of its evolution, and (2) the stage of evolution of the city, with costs increasing as the services provided shift from basic services to fuller and more complex services, coupled with a higher level of service. Whatever the stage of development, the city incurs a minimum cost for providing an adequate level of service to all citizens and enterprises within the city boundary.

Cities have a range of revenue sources for covering operating and capital expenditure (see Section 3.2), including revenue raised internally from citizens and enterprises, and revenue that is (or can be) external to the city. Figure 4 relates specifically to a city’s own-source revenues. The opportunities for raising revenue vary according to the revenue-raising instruments assigned by

national policy to the city, and the city’s revenue collection capacity at its specific stage of evolution. As the city evolves and the economy grows, revenue increases, which leads to both increased consumption of services and a greater ability to pay for services (as the income of citizens and enterprises increase).

At the survival stage, even a well-managed city typically cannot access sufficient revenue to cover the operating cost of keeping services functioning effectively. There is, therefore, a structural **fiscal gap**. Every city has a structural fiscal gap, but the gap is so large for cities at the survival stage that they are effectively financially dysfunctional. It may be possible to close this gap using external sources of finance, but not always. If it is not possible, cities have to cut operating costs to match what revenue they have, thereby compromising the effectiveness of the services provided. More evolved cities are able to generate more revenue than they need, to cover required operating costs, taking external funding into consideration, and hence have the potential to raise a surplus which can, inter alia, be used for investment in infrastructure.

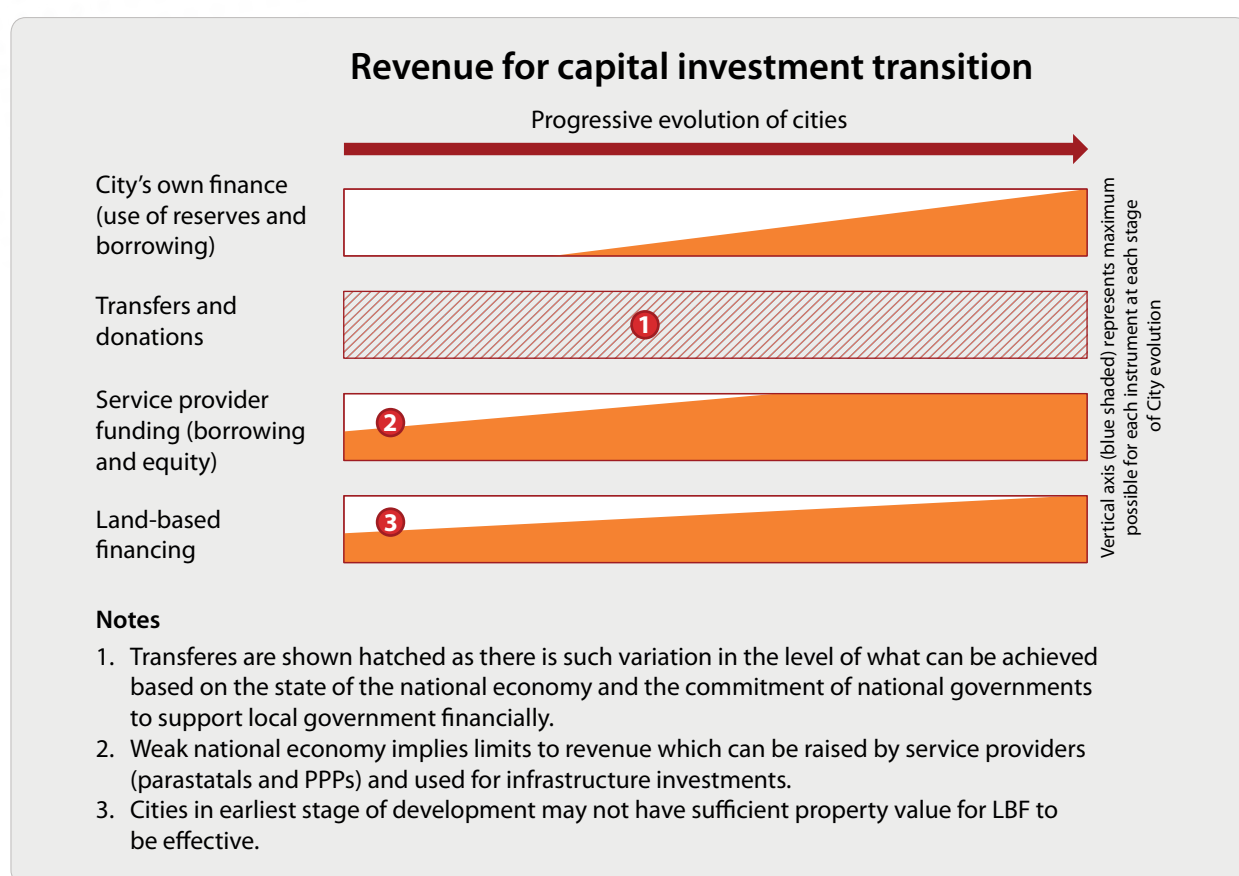
3.2 Infrastructure financing options for cities

With regard to the **city investment activity**, cities that struggle to raise sufficient revenue even to cover essential operating expenditure, such as salaries and emergency maintenance, typically cannot provide funding for infrastructure, either from reserves or through borrowing. The inability to borrow relates to the perception of lenders that a city does not have sufficient revenue in its operating account to cover the cost of capital finance (such as interest and redemption of loans). As the city evolves and

can raise more revenue, it is able to accumulate reserves and to borrow, which can both be used for capital investment in infrastructure.

If cities are unable to raise capital for infrastructure provision themselves, how does this infrastructure get provided, if at all? Figure 5 illustrates a range of options and the extent to which they can make capital finance available as cities evolve.

Figure 5: Transition for main revenue-raising options for infrastructure investment⁴



City's own finance (use of reserves and borrowing)

The first block on Figure 5 relates to the previous figure (Figure 4) and shows that survival-stage cities cannot provide funds for significant capital works, although the situation improves progressively as a city evolves. This includes the special case, rarely applied, where the city sets up a ring-fenced department or unit, which can borrow

money independently of the city and service the loan from its own cash flow. This means that the unit must be able to generate revenue itself through fees charged to consumers of the service it provides. This option may be possible for a city in or close to 'survival' mode but is more feasible for more evolved cities, particularly for services that people are willing to pay for, such as electricity and water.

4. Land readjustment not included in this figure (refer also Table 1).

Transfers and donations

The availability of transfers and donations depends on the national policy and the policies of international development partners. The role of national government with regard to financing urban infrastructure is discussed in Section 3.3. However, in relation to Figure 5, the point here is that the level of transfers from national government to fund urban infrastructure is highly variable based on the health of the national fiscus and, therefore, no attempt is made to plot a trend on the second block of the diagram.

Service provider funding (borrowing and equity)

The third block relates to funding from sources external to the city, where a service provider is appointed by the city or mandated by national government to provide services to citizens and enterprises within the city. There are two groups of service providers: parastatal organisations (independent legal entities with majority ownership by national, regional or local government), and public-private partnerships (PPPs) where a service provider is appointed to provide a service. In the latter case the appointment requires the private partner to invest in infrastructure. When the provision of capital funding is included, the contracts will be in the form of build, operate and transfer contracts, concessions, or similar contractual arrangements.

In sub-Saharan Africa, few PPPs provide **urban infrastructure** (Paulais, 2012), although private companies have been engaged in water supply in South Africa, Tanzania and Mozambique.⁵ However, the provision of services by parastatals is common. In most countries,

national parastatals provide electricity with little or no private sector participation (Eberhard et al., 2008; Foster, 2008). Parastatals also provide water and wastewater services, with parastatals owned by local authorities being the most common⁶ (Banerjee et al., 2008).

An important consideration is the extent to which these parastatals can raise funds to cover infrastructure investments. Typically they do not have the fiscal resources to do so, devoting less than 20% of their spending to capital and relying heavily on national government for finance. In sub-Saharan Africa, infrastructure provided by parastatals is usually 80%–90% funded by the national government (Briceño-Garmendia et al., 2008). Although research on the gap between capital expenditure required and funding available is limited (DBSA, 2010), the capital expenditure requirements for all electricity supply in sub-Saharan Africa (urban and rural) have been estimated at US\$26 billion, whereas current sources of funding available to cover this expenditure requirement amount to US\$4.6 billion (Eberhard, 2014).

With regard to the shape of the transition illustrated in Figure 5, given that parastatals lack the capital to invest in cities on the subcontinent, cities in ‘survival’ and ‘basic services’ modes (see Figure 3) have insufficient capital to cover required costs. However, as the economy of countries improves, typically associated with an improvement in city economies, the ability of parastatals to raise funds for infrastructure investments improves.

3.3 The role of national governments in financing urban infrastructure

National governments (and in some countries regional governments) have a key role to play in financing urban infrastructure, whether it is provided by local government or, as is often the case, by parastatals. The extent to which they provide funding and the targeting of this funding should be

established under a national urban infrastructure investment framework, but this is seldom done.⁷ Such an investment framework needs to be informed by a subsidy policy dealing with the targeting of funds paid from the national fiscus towards infrastructure for low-income households.

5. The PPPs for Dar es Salaam and Maputo have largely been a failure.

6. Personal communication with R. Eberhard on 13 October 2014, data from personal dataset on water utilities in Sub Saharan Africa.

7. An exceptional example is in South Africa, where the Division of Revenue Act, promulgated annually, sets out intergovernmental finance arrangements. It is supplemented by the Municipal Infrastructure Investment Framework (DBSA, 2010).

Subsidy policy

The research undertaken for this report did not deal directly with national subsidy policy. However, one of the objectives was to assess how infrastructure is provided to low-income households. This leads directly to assessing how funding from the national fiscus is targeted. In broad terms, financial support to poor households can be grouped into demand-side subsidies and supply-side subsidies. Demand-side subsidies are monies provided directly to individuals and households (for example, a State Pension). Supply-side subsidies are paid to the organisation providing a service, on the assumption that this money will benefit the poor by allowing them to access services at an affordable price. These latter subsidies can broadly be termed ‘transfers’.

Transfers

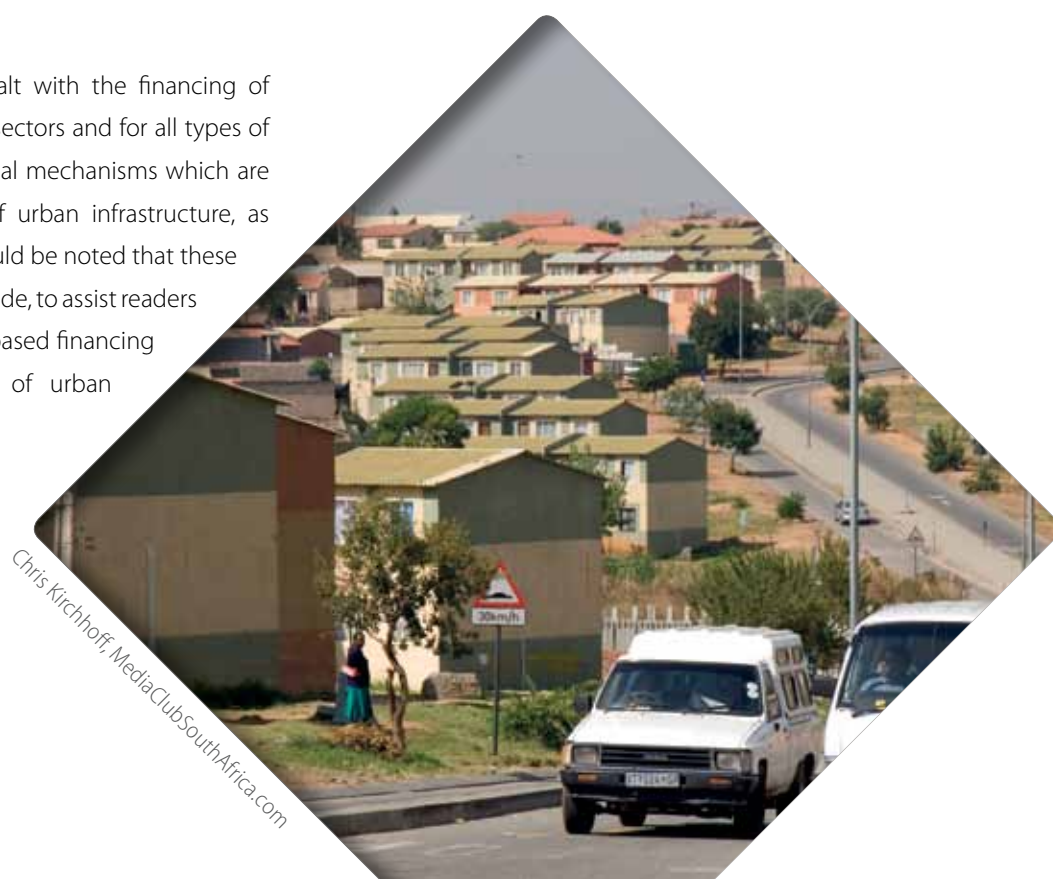
The term ‘transfers’ is applied here broadly, based on the approach by Shah (2013) to include tax sharing, general-purpose grants and specific purpose grants. Also included in this category are donations (sometimes called grant funding) provided by international development agencies and other donors.

The extent to which transfers are applied, or how national revenue is shared with local government in other ways, is highly variable both across sub-Saharan Africa (Paulais, 2012) and globally. At one extreme, South Africa has a well-developed and administered set of transfers, backed by legislation, and Addis Ababa in Ethiopia has a progressive system of national tax sharing, which provides the major portion of revenue for the city (although not sufficient for the city to provide services effectively). At the other extreme, Harare receives virtually no funding from the national government of Zimbabwe and must rely on internally generated funds.

The key question for this research is how transfers are targeted at infrastructure investment and, specifically, how they benefit the poor through providing infrastructure for low-income residential property developments (including slum upgrading). This is often dealt with under housing subsidy policy, but the emphasis here is on providing the infrastructure associated with housing. The argument is made below that the role of national government in funding internal infrastructure for low-income residential property developments is most important.

3.4 Financing particular components of infrastructure

The discussion above has dealt with the financing of urban infrastructure across all sectors and for all types of infrastructure. There are financial mechanisms which are suited to specific elements of urban infrastructure, as shown in Tables 2 and 3. It should be noted that these tables are intended only as a guide, to assist readers in understanding where land-based financing fits into the bigger picture of urban infrastructure finance.



Chris Kirchhoff, MediaClubSouthAfrica.com

Table 2: Suitability of finance mechanisms for each service

TYPE OF INFRASTRUCTURE	TYPE OF SERVICE	CITY ¹	PARASTATAL ²	LAND-BASED FINANCING (LBF)	DEVELOPER ³	TRANSFERS & DONOR ⁵	COMMENT
Bulk	Water and Wastewater	L	M	L		M	Normally provided by parastatals in sub-Saharan Africa. While these parastatals should raise their own finance, they seldom do this at sufficient scale. They are, therefore, reliant on donors and transfers with small potential for contributions from city sources and LBF.
	Electricity		H			L	Normally a national function in sub-Saharan Africa, with service provision by national parastatals. These parastatals should be self-funding, at least for bulk infrastructure, but in reality most are reliant to some extent on transfers and donors.
	Distributor roads	L		L		M	These are the higher order, high-traffic roads in the city. While there is some potential for city-sourced funding and LBF, these roads are often funded from national transfers or loans, or by donors. There is also potential for toll roads.
	Public transport			L		H	At this stage of development, sub-Saharan African public transport infrastructure, particularly mass transit systems, is most likely to be funded by donors and transfers (including loans taken out by national government). However there is potential for LBF through betterment taxes (in South Africa specifically).
Connector		L	L	H		L	Ideally suited to LBF, as the infrastructure is strongly associated with property developments. But this infrastructure may also be funded by parastatals in the case of water, wastewater and electricity. There is some potential for contributions from city sources and from transfers.
Social and community		H		L		M	Often funded from city sources, but national government plays a significant role, particularly if the function is national. Some potential for LBF.
Internal	Commercial and industrial				H		Should be funded by the developer as part of their primary obligation, prior to applying LBF.
	Mid to high income residential				H		As for commercial and industrial property.
	Low income residential	L		L	L	H	Low-income residential property developments are seldom undertaken by developers, who can raise capital themselves. But there are examples of informal property developments where internal infrastructure is funded by the community. There is low potential for this to be funded from city sources and LBF. As the social benefits of funding this infrastructure are so high, the role of national government in funding this infrastructure through transfers is most important.

1. Includes direct use of operating surpluses and debt finance.
2. Debt finance, equity with possible support from state and donors.
3. This is the minimum contribution by the developer before LBF is applied.

3.5 The application of land-based financing

Land-based financing overview

Land-based financing becomes an important funding option when considering the limited extent to which transfers, city own-source revenues and service provider funding are able to cover the infrastructure investments required for cities in sub-Saharan Africa to function effectively. The lowest bar in Figure 5 shows that a form of land-based financing can function even for cities in 'survival' mode, which is the most important feature of this grouping of financing instruments. However, at this stage of a city's evolution, the value of property in the city is relatively low and the infrastructure needed is mostly among poor households who can pay very little, if anything, towards the capital cost of infrastructure. This is not ignoring the fact that in some of these 'survival' cities, pockets of very high-value land are found, mainly because they fall within areas that are both well located and have some access to infrastructure. This shows that, even in these cities, an unmet demand for serviced land exists, which will make land-based financing of one sort or another viable. Such financing will not meet the cities'

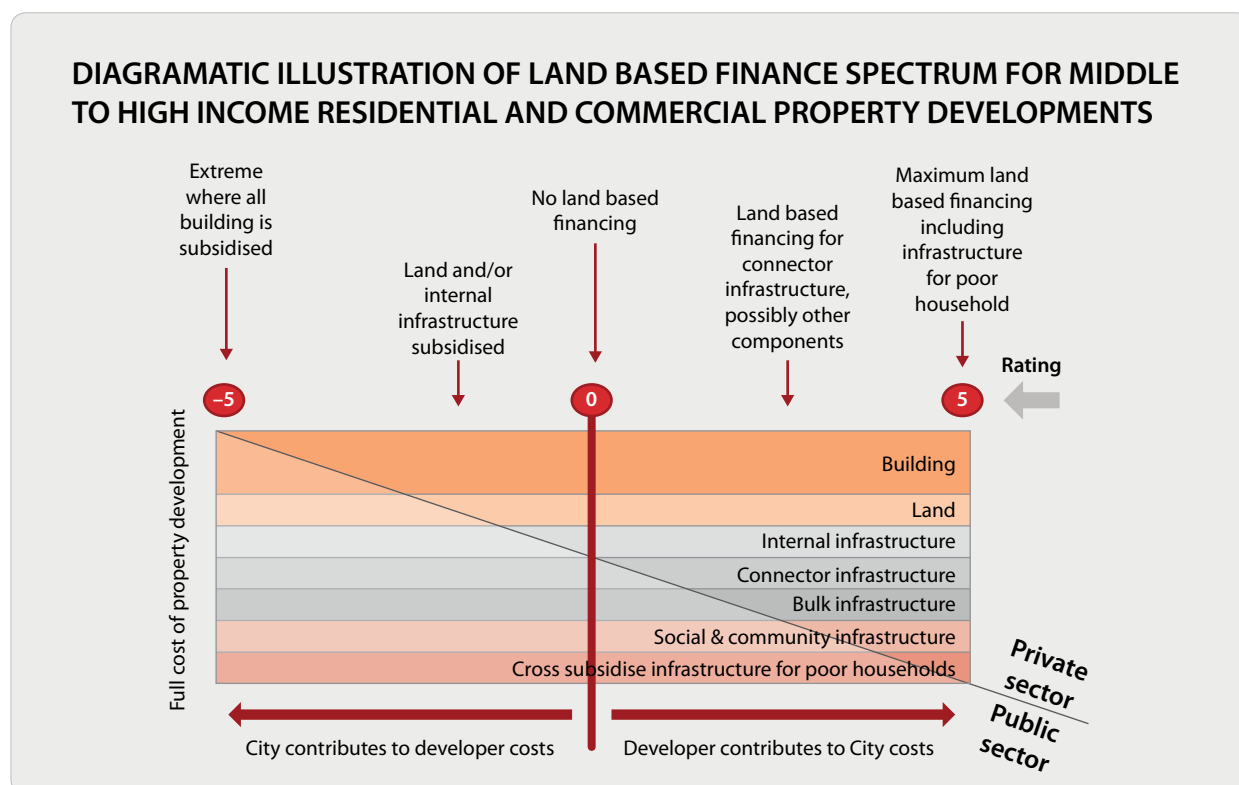
overall infrastructure needs but will support a higher proportion of more formal land development than would otherwise have been the case. However, overall land-based financing for cities in survival mode has its limitations.

The combination of capital funding sources (including land-based financing) implies that cities in 'survival' mode have a serious lack of funding for infrastructure investment. The situation improves for cities in the 'basic services' stage of evolution, but they too lack capital.

Principle of land-based finance linked to subsidies

Drawing from Table 2, the principle applied here is that land-based financing should be used only for investing in the connector, bulk and social infrastructure that is over and above what is required within the property development. Preferably, there should be some form of cross-subsidy from commercial and middle- to high-income residential property owners to fund infrastructure for poor households. This situation is illustrated in Figure 6.

Figure 6: Land-based financing and property development costs



The neutral point in Figure 6 (rating 0) relates to the 'benchmark' situation, where a property developer covers the full cost of internal infrastructure, land and building. Moving towards the right-hand side of the diagram indicates a positive trend towards land-based financing, as the developer (and ultimately property owners) pay progressively more for connector, bulk, social and community infrastructure. On the extreme right-hand side (rating 5) the developer will also contribute

infrastructure, or funding for infrastructure which serves poor households.

On the left-hand side of the diagram the public sector contributes to the cost of internal infrastructure, land and, at the extreme, the building itself. In relation to the 'benchmark' position (rating 0), this represents a government subsidy to the development, which could be commercial, high- and middle-income residential property.

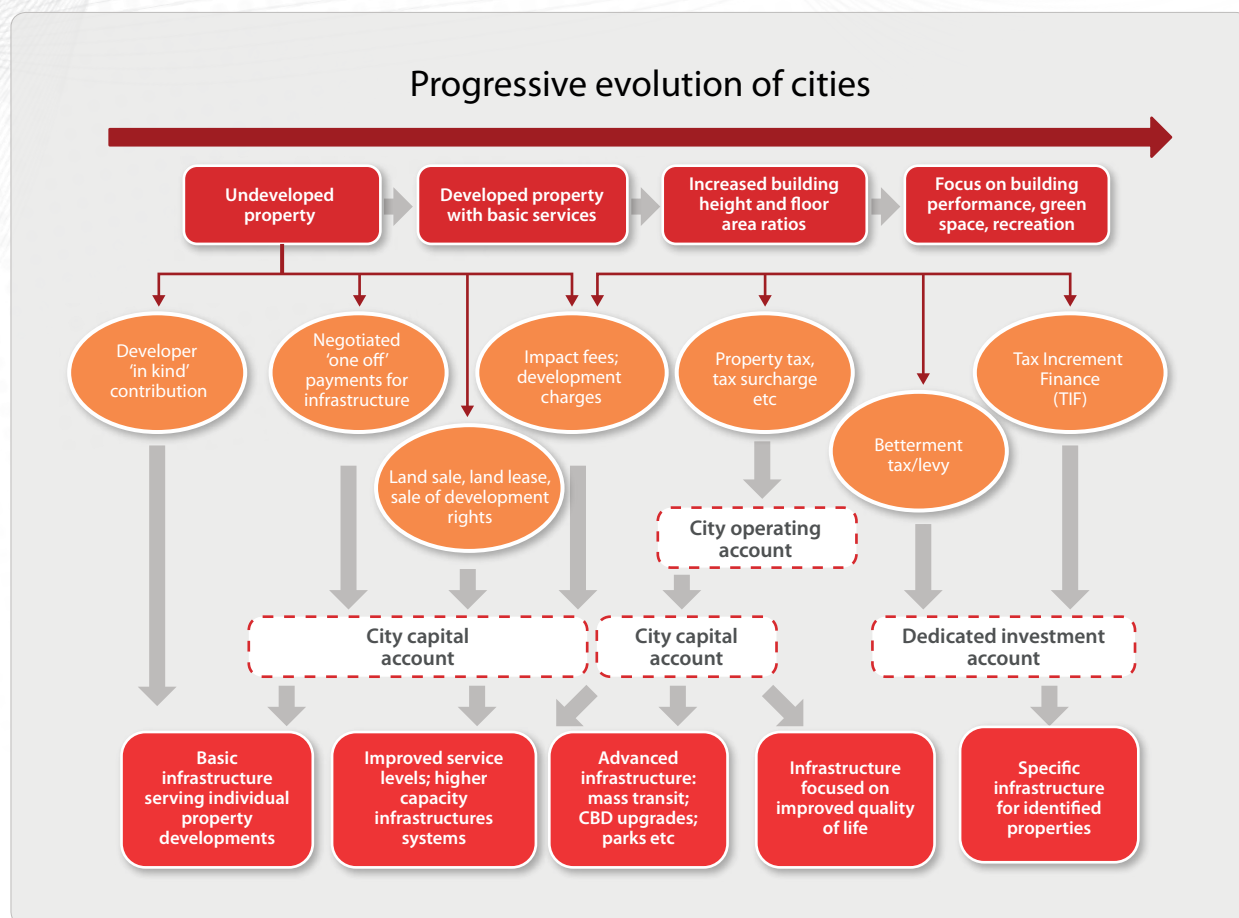
3.6 Where to use each land-based financing instrument

Property owners – often with the developer acting as an intermediary – can contribute to providing connector, bulk, social and community infrastructure, and possibly subsidise infrastructure for poor households, through a range of land-based financing instruments (see Table 1). Figure 7 relates to the way individual land-based financing instruments are applied to fund the provision of infrastructure across the transition from cities in 'survival' mode to those in 'advanced' mode and beyond. Land-based financing is directly related to the property development process, as the funding is raised from property developers or property owners. In the early stage of a city's evolution, the emphasis is on providing new property on undeveloped land (often rural land). As the city evolves, building height and land-use intensity increase, and the emphasis is on improved building performance. The emphasis is also increasingly on the relationship of property to the living environment within cities, with improved green spaces, recreation and health facilities. In addition, there is a move away from land-based financing instruments that merely attempt to recover the costs imposed on the city by the new development. The move is, ultimately, towards instruments that extract a proportion of the surplus value added to the

land by the land development process and then redistribute that money through the city, through investing in either social infrastructure or infrastructure for low-income residential development.

Land-based financing instruments allow for funding to be raised through the property development process, by increasing property rights, or increasing the benefits brought about by improved infrastructure. Some of the instruments are more effective for cities in 'survival' or 'basic services' mode and others become effective as cities evolve and have the more complex administrative arrangements in place to support these more sophisticated instruments. Highly evolved cities have the ability to employ any of the land-based financing instruments. Figure 7 shows how land-based financing instruments apply across the property development and infrastructure provision spectrum.



Figure 7: Land-based financing instruments and city evolution

Note that the tools at the right of the diagram are taken up cumulatively over time by an evolving city, so that well-developed cities typically use the full range of LBF tools

In Figure 7, the land-based finance instruments on the left-hand side are used in advanced cities and can also be used in cities that are at an early stage of development. **Contributions 'in kind'** can be negotiated with developers and do not require the city to have any complex systems in place, although the capacity to negotiate with a developer remains key to success. Similarly, a **negotiated payment**, within a properly regulated and structured environment, requires only a system that ensures the money raised by the city is in fact used for infrastructure related to the property development. In this case, the negotiation requires a particular skill and there is room for corruption.

For **land sale** and **land lease** options, the starting point needs to be that the city has control over the land and can, therefore, sell or lease it. In many countries, all of the

land belongs to the state, while in others its use is delegated to the local government level. Even in countries where the state does not have a first claim on the land, a proactive city with the right resources and capacity could choose to buy up land, particularly for expansion plans or plans to provide new infrastructure. Ideally, this land could later be sold for more than it cost, to generate revenue. The sale of development rights is also a one-off transaction related to a particular piece of land or developed property, where the developer gets increased value through a rezoning or an increase in permitted floor area ratio (the ratio of building floor area to plot area). To be considered a land-based financing mechanism, funding raised through all of these instruments, as one-off payments, should be directed towards infrastructure investment and hence be 'protected' within the city's accounting system.

The literature sometimes differentiates between impact fees and development charges but sometimes uses the terms synonymously, which has given rise to confusion in practice. This report uses the term **development charges**, which means fees, implying that they are purposefully calculated to cover the cost of infrastructure associated with a given property development. Alternative means of calculating charges associated with development are based on (e.g.) land area or land value, and could be termed a 'benefit tax' (see Phatak, 2013 for discussion of a proposed Urban Infrastructure Benefit Tax in India). Here, a development charge is assumed to be related to the anticipated impact of the development on different infrastructure networks (the 'rational nexus'), and the use of the word 'tax' in relation to a development charge is avoided.

A development charge is based on a considered policy and a formula that relates to the finance required for infrastructure investment in the city. It can be applied equally across all property developments. To a large extent, development charges avoid having to have individual negotiations for each property development. The other key feature of this charge is that the money must be ring-fenced for infrastructure provision.

On the right-hand side of Figure 7, the land-based financing options involve property owners paying money over a continuous period, as a monthly or annual amount. **Property tax** is typically paid into the city's operating account. If property tax is to be considered as an infrastructure financing measure, then the operating account needs to be in surplus, so that funds are available for direct investment in infrastructure, for servicing loans or for repaying bonds. Surcharges on property taxes can be charged to property owners in specific areas (for example, city improvement districts) but are not typically used for providing infrastructure.

Betterment taxes (or levies) are amounts charged to specific property owners who will benefit from an improvement in infrastructure or through an

increase in property rights. One of the best examples is in Medellín (Columbia), where betterment taxes are charged in addition to property tax bills for those properties that will benefit from new public transport infrastructure (Ochoa, 2011). Typically, a betterment tax is paid into a dedicated account and used to fund specific infrastructure through, for example, repaying the bond issued to finance the infrastructure that triggered the land value increase.

Tax increment financing (TIF) is a tool used in developed countries, particularly in the United States. A TIF area is designated, and the increased tax collected is dedicated to financing improvements. The TIF is generally used to finance loans taken out by the city, via the city's operating account. These loans should be allocated for use in the TIF area. This is an advanced tool, requiring up-to-date property valuations.

In sub-Saharan Africa generally (with the exception of South Africa), using betterment taxes and TIF to finance urban infrastructure has limited applicability. Both typically build on property tax systems and share the limitations of property taxes (Fjeldstad et al., 2014). In addition, they require special accounting and capital financing instruments.

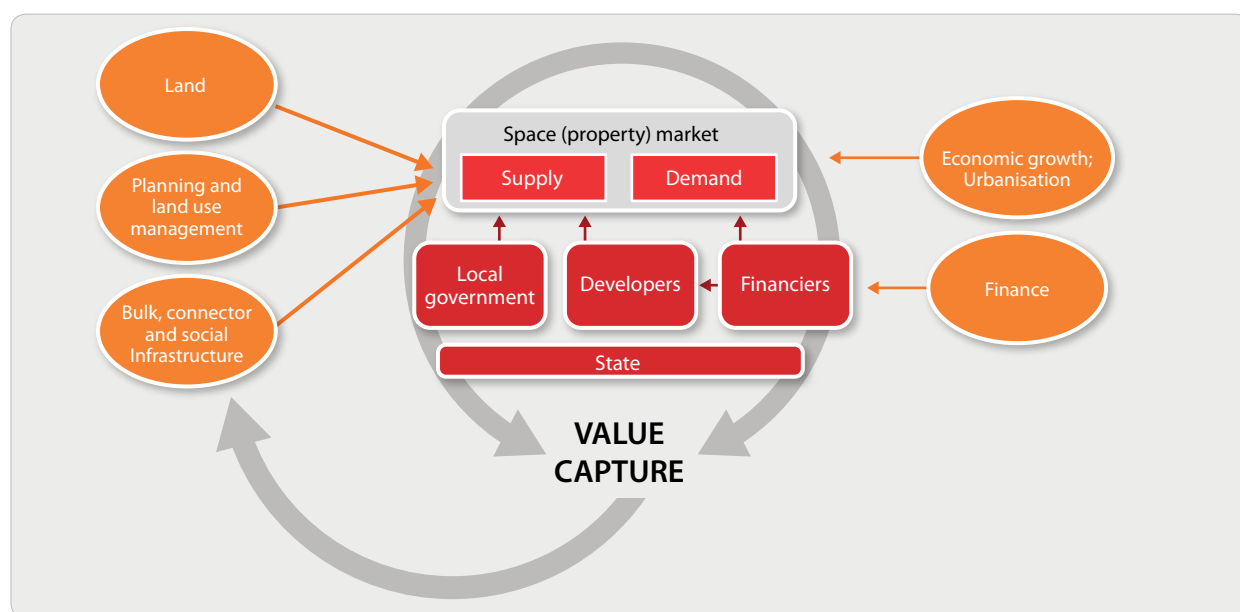


3

CONDITIONS FOR EFFECTIVE LAND-BASED FINANCING

Land-based financing takes place through the process of developing and improving property and the infrastructure which is associated with the property. Figure 8 illustrates the factors that influence the supply and demand of property, and the institutions that mediate the process of value capture and associated land-based financing.

Figure 8: Influences on land-based financing



The following criteria for successful land value capture are based on the review of the international literature, findings from the case studies and the judgement of team members.

4.1 Demand for property

For land-based financing to take place, demand for property needs to increase, as this is directly associated with an increase in property value. The property value may increase because of property being developed on undeveloped land or improved intensity of use. Increased intensity of use is defined by either greater floor area ratio or increases in property subdivision

Demand for property is associated with a city's level of economic development: values are higher in more

economically developed cities. Demand is also influenced by increased population and by a city's rate of economic growth. While population growth is important, the economy is arguably the more important driver because it creates a direct demand for commercial and industrial property and for higher-value residential property as household incomes in the city increase. The opportunity for land-based financing is associated mainly with middle- to low-income residential property and commercial and industrial properties, which are all strongly influenced by economic growth.

4.2 Supply of property

The supply of property to meet demand is a function of access to land, the extent to which property developers are active in the city, and the availability of property-related finance.⁸ The availability of infrastructure is also a

consideration but is applied here as an indicator of 'effective city' rather than as a criterion for supply of property. This is covered in Section 4.4.

4.2.1 Access to land

It is assumed that land is always available for sub-Saharan African cities to expand, either within the current city boundary or on the periphery. However, specific conditions need to be in place so that land is 'supplied' in such a way that property owners will be willing to invest, and cities will be able to capture part of the value of this investment. These conditions relate to (1) the security of tenure established through national legislation and the ease with which tenure can be registered, and (2) the way in which the controls on the use of the land are managed, which influences both the quality of the built environment (leading to investor confidence) and the city's ability to capture value associated with higher orders of land use.

The ongoing processes of adapting, reforming and strengthening land-administration systems, including land tenure frameworks, are not likely to be completed in the short term. As Napier et al. (2013) point out:

These are complex systems. Creating a more appropriate system of land use management where the tenure rights of the majority of urban dwellers are properly recognised and where many of the customary views of land are understood and codified is not likely to be a simple matter.

Opportunities for land-based financing instruments will emerge at different stages, as each country's land tenure frameworks and land ownership patterns evolve. Cities will have to engage with these complexities in order to support the levels of real estate development needed to

accommodate growing economic and population pressures. Commercial interests in secure and expeditious land-use approvals need to be weighed up against the political imperative to respect and strengthen underlying land rights, whether they be formal, informal or customary.

The issue of land-use management conditions is debatable. On the one hand, property developers and owners see land-use regulations as too onerous and thus a constraint to development.⁹ On the other hand, land-use management is regarded as necessary for several reasons:

- Control over property development promotes the public good, such as the evolution of effective and liveable cities where businesses and households all have equitable access.
- The process of infrastructure provision is aligned with land use.
- The stage at which the city grants land-use rights to the developer is critical for land-based financing, as at this stage developers and property owners gain a step change in the value of their properties – this is therefore a prime opportunity for the city to capture part of this value, at least where land development applications are submitted through the formal channels.

Two criteria are proposed for sound land-use management practice: the extent to which land is formally approved, and the ease with which land-use management applications are processed. The research found that developers, particularly smaller property developers, are

8. While finance remains essential to cover the capital cost of developing the property, there are examples where property owners will gain access to land but not have the money to complete the building on the property.

9. *The Economist*. 2015. 'Space and the city', 4 April 2015.

bypassing the land-use management system, subdividing or increasing floor area ratios without approval, thus acting 'informally'. This could be in spite of the city having established land-use application and approval systems.

The location of the land-use management under 'access to land' is also debatable. It could be located under 'effective city', as it relates to the systems and capacity within the city. However, locating all the land and property development conditions and associated criteria under 'access to land' makes more sense.

The proposed secondary criteria associated with 'access to land' are:

- Degree of secure tenure: tenure allows property owners with sufficient security to raise finance or commit their own financial resources to purchasing or improving a property.
- Ease of registering ownership: increased certainty and speed associated with property developments brings more property owners to the market, and lowers costs of development.
- Land use formally approved: without formal approval of land-use conditions, property owners have less security and are less likely to invest.
- Ease of getting land use approval: the speed of processing land-use applications adds security to investors and reduces costs of development.

4.2.2 Active developers

The nature of developers is discussed in Section 6.2. Developers facilitate the supply of property. They locate property, liaise with potential owners, facilitate the planning and subdivision process, and construct the internal infrastructure and buildings that make the

property useable to future owners. To be effective, land-based financing needs to be a private sector activity, as the value of the property in private hands is 'captured' by the public sector in order to provide infrastructure.¹⁰ What is important is the ease of doing business.

4.2.3 Access to property-related finance

Access to finance from banks is an important factor that influences the supply of property. Developers require finance, but the purchasers of property generally also require finance to buy either residential or commercial property. This has a direct link to value capture, as the

value is ultimately captured from the owner of the property who has to be able to raise this money in the first place. Therefore, the greater the supply of property-related finance, the greater the prospects for effective land-based financing.

4.3 Effective state

While the city is the primary agent through which land-based financing takes place, it is important, if not essential, for the state to support and promote land-based financing. This is because (1) legislation needs to be in place that allows for land-based financing (or at least does not prevent it); (2) land-based financing can be difficult to implement and so state support (possibly working with

development agencies) to cities is a key success factor; (3) without a firm position on this from the state, cities have a tendency to play one off against the other to offer developers the best property 'deal',¹¹ which is not in the national interest; (4) land-based financing is in the state's interest, as it reduces the obligation from the national fiscus to fund a portion of urban infrastructure.

10. Although it is acknowledged that if the public sector develops property and sells the property to a private buyer at a price which allows for bulk and connector infrastructure to be provided, this also a form of land-based financing.

11. This has occurred with development charges in South Africa where municipalities have discounted the contributions required from developers and this is why the National Treasury wants to establish a mandatory policy for all municipalities.

Sound governance

For land-based financing to work effectively, the quality of governance and accountability within a country and a city's legal and political system are essential requirements. By its very nature, land-based financing is susceptible to corruption and mismanagement. For cities to flourish and be assisted in raising their own finance, national government must have sound governance, with proper financial controls and minimal corruption. Similarly, cities need to be governed in accordance with laws and policies that promote clean and accountable urban management. In many sub-Saharan African cities, profits from over-inflated property markets in elite enclaves have led to fierce contestation between national and local political forces, with both parties wanting to manage and benefit from the development process. The weak legal status of local government in almost all African countries makes it more

difficult for cities to resist national government interference in urban management. This makes it more difficult for cities to use land-based financing for their intended purposes.

Level of transfers to local government

While the ultimate aim is for cities to be fiscally independent of national government, cities in sub-Saharan Africa are a long way from achieving this. Their success, and the success of their own efforts to raise finance, depend strongly on transfers from the national fiscus or through appropriate tax-sharing arrangements.

Commitment to support local government

As noted above, the success of a land-based financing programme is strongly influenced by the extent to which national government supports local government.

4.4 Effective city

The city's role is important for the success of land-based financing and generating substantial funds for infrastructure provision, as value is captured through giving property rights and/or improved infrastructure to developers and property owners. Effective land-based financing, therefore, depends on having an effective city that has real control over land-use management, and the financing and provision of infrastructure. The criteria for an effective city are:

- Functions relating to land-use management and the provision of infrastructure are devolved to local government, and the city has the capacity to implement these functions.
- The city or designated service provider has proved itself by having a service provision track record.
- The city is financially viable.
- Adequate technical capacity and political will exist.
- Planning and land-use management are effective.
- Citizens and businesses are willing to pay for services.

Functions devolved

While planning and land-use management responsibilities are commonly devolved to cities, the responsibility for providing infrastructure is less commonly devolved. However, internationally the move is towards greater devolution. This is important because the city has no incentive to take responsibility for financing infrastructure if it is not responsible for providing infrastructure, either directly or through control over a parastatal provider.



Service provision track record

A key indicator of a city's success (and that of its service-delivery partners) is how many households within a city have access to services. This could also be considered the ultimate success indicator of land-based financing (assuming such financing was part of service delivery). However, for this analysis, the service provision track record is used as an indicator of an effective city.

The three most commonly available indicators of service provision are the percentages of households in a city with access to water supply, sanitation and electricity. Urban road access is also an important service indicator but is not included because it is difficult to measure and internationally consistent data is not available.

How access to water and sanitation is measured varies considerably. The measurement of access to sanitation varies the most because of the range of views as to what constitutes an 'adequate' service (from a connection to a sewerage system to an improved pit latrine, for example). It has not been possible in the time available for this scan to fully assess how this access is measured, and the data is accepted as it is recorded in the various references used.

Overall, the quality of the data is poor, with some cities having no data or outdated data going back to 2003. Nevertheless, the best available figures have been used. The data for each of the three services is given in the data annexure to this report. In incorporating this data into the overall multi-criteria analysis, the indicator for access to these services is compiled using a water-to-sanitation-to-electricity weighting of 40:30:30.¹²

Financially viable

Financial viability is central to the success of a city and illustrated by the country case studies: Nairobi and Harare do not have enough revenue to cover their current operating costs, and so any funds raised for infrastructure

are used to cover operating expenses. Furthermore, a financially strong municipality is obviously better placed to set up better systems and recruit more qualified staff.

Adequate technical capacity

Well-qualified staff – primarily planners and engineers – are necessary both for sound land-use management and effective infrastructure provision. Many land-based financing instruments require property valuations, and so the absence of sufficiently skilled property valuers is another constraint on implementing many land-based financing instruments in sub-Saharan Africa.

Effective planning and land-use management

This is an important indicator, as a weak planning and land-use management system makes it very difficult to implement land-based financing consistently across the city. In theory at least, the optimal point for the local authority to extract a payment or levy is when a developer obtains approval to intensify use. The difficulty is that, in many cities, developers either proceed with their developments without first securing a formal land-use approval or are able (and willing) to obtain *de facto* approval through corrupt channels. For land-based financing to work effectively in sub-Saharan Africa, planning and land-use management systems must be incrementally improved and rationalised, to ensure improved capacity over time to implement land-based financing.

Citizens willing to pay for services

The extent to which citizens are willing to pay for municipal services (provided by the city or a parastatal working for the city) is an indicator of established relationships with consumers of the services and of potential financial viability. It could also approximate a willingness to pay for infrastructure.

12. It would have been possible to take access to the three services separately into the ALICS database. However, this would have required a third-level criterion hierarchy which was considered to be unnecessary.

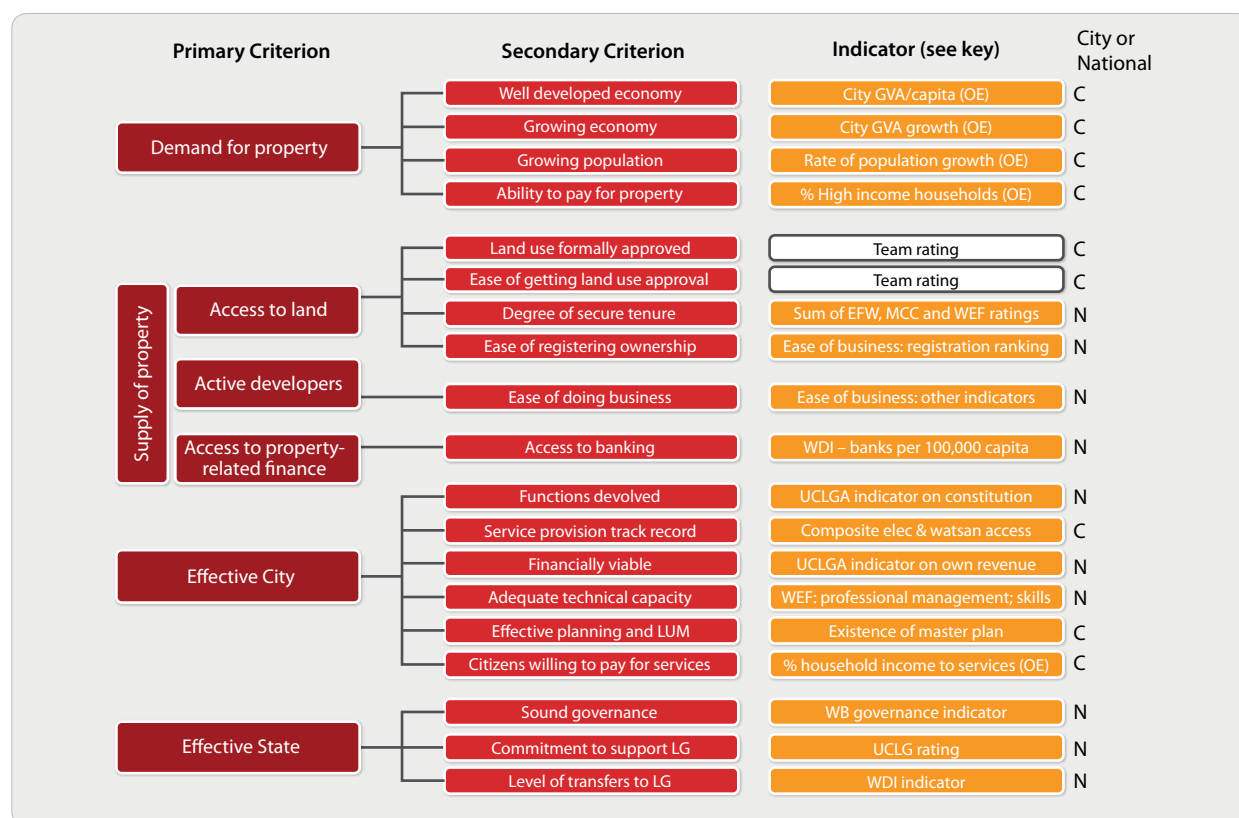
5

THE POTENTIAL FOR LAND-BASED FINANCING IN SUB-SAHARAN AFRICAN CITIES

Multi-criteria analysis (MCA) is a technique for comparing a number of options, where each option has a range of attributes (see DCLG, 2009 for more on this technique). The attributes can be framed as criteria, which are all required to be associated either with a measureable indicator or assessed through expert judgement or the opinions of stakeholders. Each option is scored in relation to each criterion. MCA then provides for the weighting of criteria to get a final 'score' for each option which allows for them to be ranked.

This analysis uses MCA to compare the potential of sub-Saharan African cities to apply land-based financing methods. The criteria are covered in Section 4. These criteria must be related to an indicator, and sufficient data for each indicator must be available for the cities being investigated. Report 1.10 covers these indicators and the data are covered in more detail. The criteria are structured into a decision-making 'tree' (Figure 9).

Figure 9: Decision-making tree for MCA



As Figure 9 shows, 4 of the 6 primary criteria have secondary criteria. The MCA technique requires that the secondary criteria are first applied, to get a score for the primary criteria. This is done by weighting the relative importance of each secondary criterion under each

primary criterion. The primary criteria can then be applied with a weighting of each of these against each other to get a final result. The result is in the form of a score out of 100 for each city.

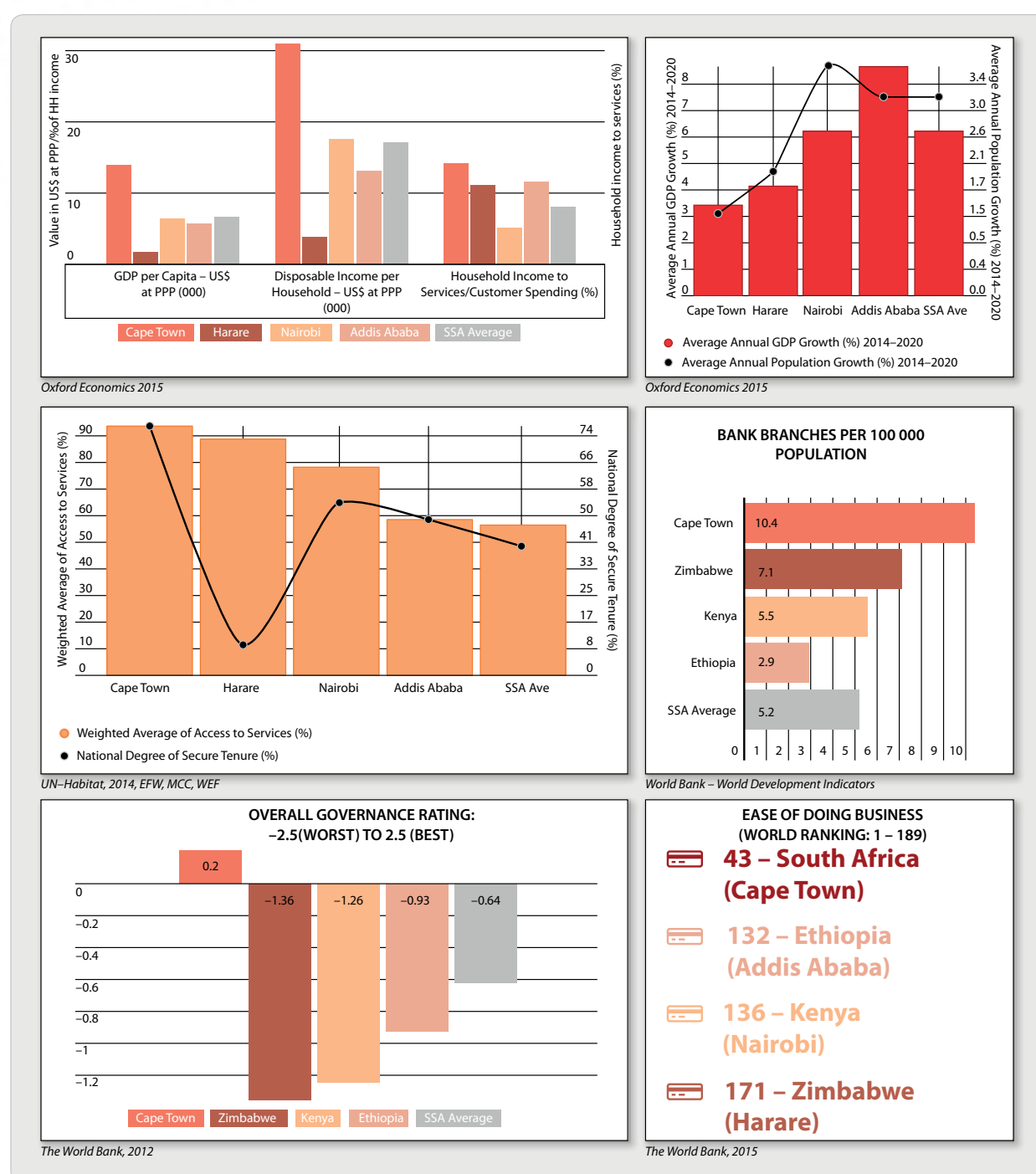
The weighting of the criteria in relation to each other is a matter of judgement, and the MCA technique requires that those most informed about land-based financing agree on the weighting and that the impact of changes in weighting on the final result be tested. The actual weighting applied is described in Report 1.10.

An interactive web-based database was set up as part of this project, referred to as the 'Africa Land and Infrastructure City Scan' (ALICS). All the data for each city and each

criterion is stored in ALICS database and can be publicly accessed. The MCA analysis is undertaken on this site. The site makes provision for adding information, including additional criteria and their associated data. The decision-making tree can be amended and calculations undertaken to develop new criteria. The implications of weighting changes can be easily assessed.

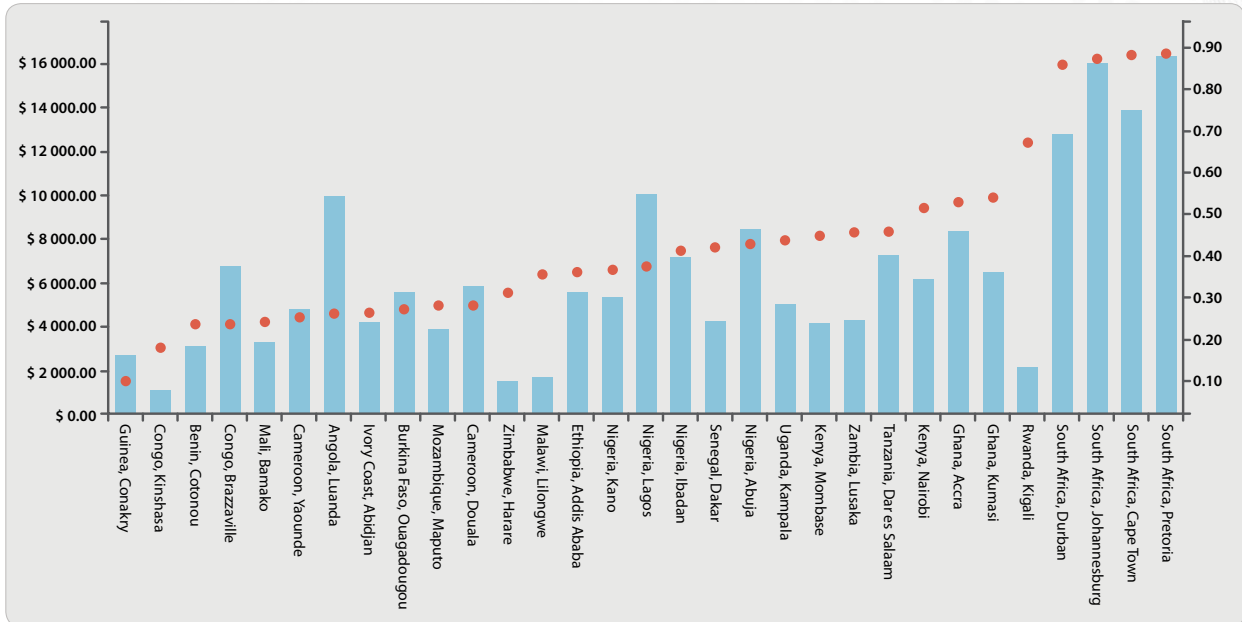
A sample of statistics used as indicators for land-based financing potential are given in Figure 10.

Figure 10: City comparison sheet: statistics for selected sub-Saharan African Cities



After applying the MCA using the weighting shown in Table 5, the final results of the analysis are provided in Figure 11.

Figure 11: Results of MCA to assess potential for land-based financing for 31 cities



GDP per capita (US\$ with PPP) - left axis (bars). MCA rating (potential for land-based financing) – right axis (dots)

There is an obvious correlation between the city's level of economic development and the potential for land-based financing. It should also be noted that the results relate to potential only, as measured using available data across all 31 cities. The following section deals with factors which influence land-based financing beyond just potential.



6

CURRENT APPLICATION OF LAND-BASED FINANCING IN SUB-SAHARAN AFRICA

This section deals with the extent to which land-based financing is actually taking place. The research found that certain factors influence whether land-based financing achievements exceed or fall short of the potential assessed in Section 5.

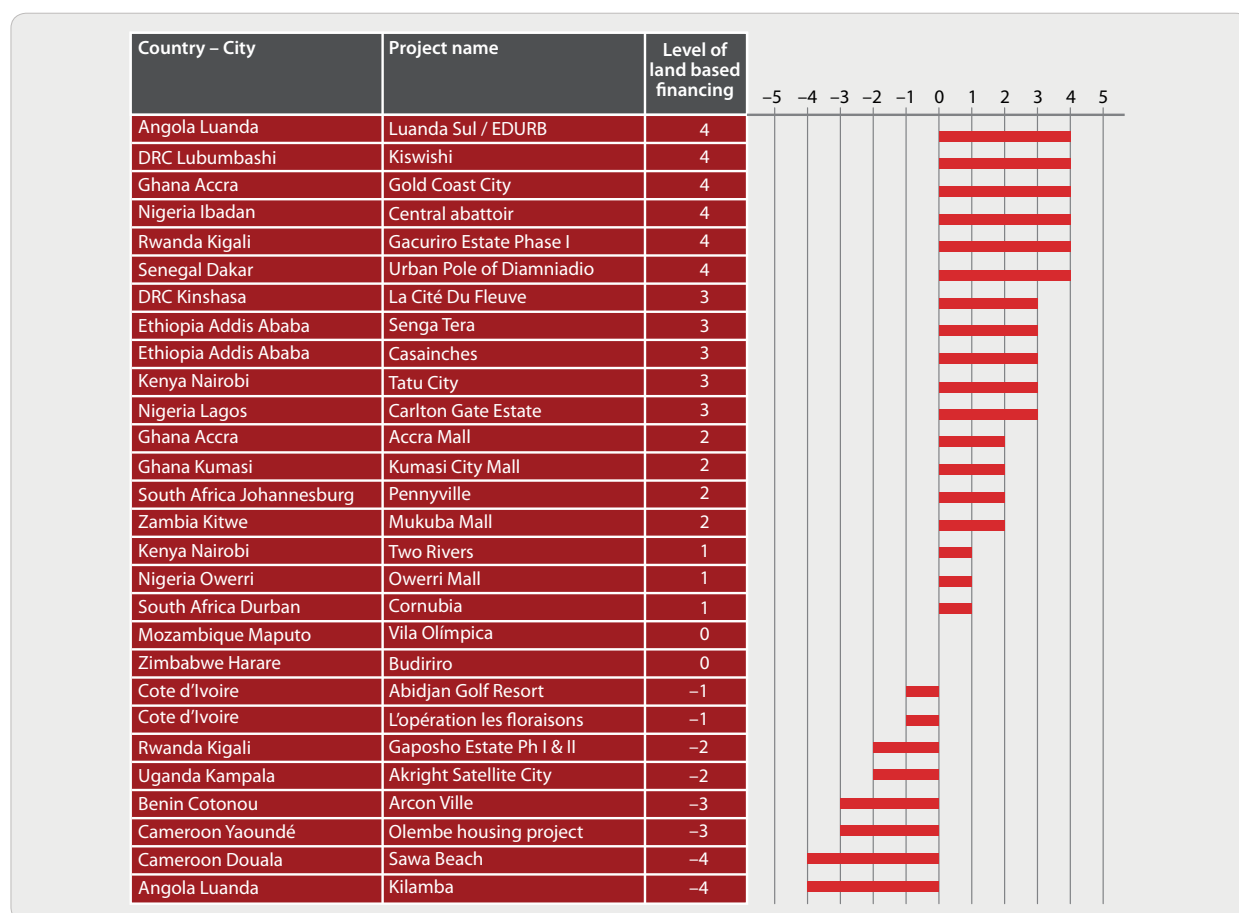
The extent to which land-based financing is taking place

In this research, land-based financing is defined broadly and includes in-kind contributions by property developers. If this broad definition is applied to the selected 16 countries, land-based financing of urban infrastructure appears to be relatively widespread in sub-Saharan Africa. Such financing is found in 10 of the 16 countries: Angola, Democratic

Republic of Congo (DRC), Ghana, Ethiopia, Kenya, Nigeria, Rwanda, Senegal, South Africa and Zambia. However, 'negative' land-based financing, implying commercial and high- to middle-income property developments are being subsidised (see Figure 6), was found in Benin, Cameroon, Côte d'Ivoire and Uganda. The property developments in Zimbabwe and Mozambique showed a neutral position, but other investigations (as part of the country case study) showed a propensity towards subsidy in Zimbabwe. Further, in Angola and Rwanda the results are mixed, with property developments indicating commercial and high- to middle-income housing being subsidised.

Figure 12 shows the spectrum of land-based financing 'scores'.

Figure 12: Land-based financing ratings for the property developments



It is important to note that these results are based on a sample of 28 property developments in just 16 countries and include relatively large cities. Further, the selection criteria favour larger-scale developments, where relatively

good information is available. Yet sub-Saharan Africa contains 48 countries with a wide variety of property development circumstances. Nevertheless, land-based financing does occur quite widely.

6.1 The types of land-based financing instruments being applied

In all but one country (Ethiopia), the land-based financing instrument applied is an in-kind contribution by property developers. This contribution takes usually the form of the actual construction of connector infrastructure serving their developments and, in some cases, of bulk infrastructure.

Several countries have in place a fee-based instrument such as a development charge, but these fees are waived for the development concerned, or the revenue collected is not applied to the financing of infrastructure (Table 4).

Table 3: Land-based financing instruments applied in sub-Saharan African countries

COUNTRY	TOOL APPLIED
South Africa	Development charges have been applied quite widely in the past, and recently a national policy on development charges was completed. However, the charge was applied for the two sample property developments (see Box 1).
Kenya	Developers are charged an infrastructure levy of 0.05% of the development cost, but this does not go into a separate account and is not used to finance infrastructure provision.
Zimbabwe	Developers are charged an 'endowment fee' of up to 20% (generally closer to 10%) of the value of the property. Historically this has been paid into a separate account intended for capital works, but in reality this money has been used to cover operating revenue.
Côte d'Ivoire	National government levies 4 property taxes on property developments, with the intention that they be redistributed to local government. However, the Abidjan case studies found the developers were exempted from 2 of these taxes and no indication that the taxes resulted in infrastructure investment by the city.
Nigeria	The owners of property in new developments pay a land-use charge, which is a one-off property-based tax levied by Lagos State Government. This tax is assessed on the capital value of the property. However, the case study found no evidence that the revenue raised was used to finance infrastructure.

The emerging picture is that some form of development charge is used in these countries but has not been effective in financing infrastructure.

The land leasing arrangement in Ethiopia is exceptional because the state owns the land and hands over the right

to lease it to its cities, which is uncommon in sub-Saharan Africa (see Box 2). Even more unusual is that this control over land tenure and land holding is linked up with control over all major urban infrastructures, as it is in the case of Addis Ababa.

Box 1: Developer charges policy as applied in South Africa

For many decades most South African municipalities were empowered to require that developers make a contribution in cash or kind (either in the form of land or the installation of infrastructure) as a condition for granting a land-use change. Different provinces had different rules as to the basis on which the municipalities could calculate the amount owed by developers, as well the purposes to which the developers' contributions needed to be put (although these invariably focused on capital investment in infrastructure or land). This resulted in uneven collection across municipalities. A study by the World Bank also showed that municipalities were recovering only around 10% of the contributions that they could theoretically demand from developers.

National Treasury viewed this situation seriously. It saw municipalities fiscally 'racing to the bottom': competing with each other to provide the lowest costs for developers in order to attract investment into their municipal areas. Over time, this reduced the municipal funds available for investing in infrastructure, prompting growing demands on the national fiscus to meet municipalities' obligations to provide infrastructure. National Treasury is in the process of developing a policy framework and legislative reform in order to establish a mandatory and uniform set of rules applicable to development charges across the country.

The draft policy framework retains the granting of a land-use change or subdivision approval as the trigger for a developer to make a contribution, in cash or kind. However, the total value of that contribution is calculated based on a uniform formula that relates to the change in intensity of land use, from prior to the developer submitting a rezoning or subdivision application to after the application is granted. The formula is designed to capture the full costs to the municipality of expanding the capacity of its infrastructure networks to accommodate the additional impact on those networks by the new development. The draft policy stipulates the need for maximum transparency and openness in calculating, paying and spending development charges. It also prohibits municipalities from granting any exemptions from development charges unless alternative funding sources are found to make up the loss of revenue that would otherwise result from the exemption. Although in progress for more than 5 years, the policy has not yet been finalised. The intervening enactment of new spatial planning and land-use management legislation, which is inconsistent with the draft policy framework in important ways, has slowed down the process of introducing the new policy and its accompanying legislation.

Box 2: The land leasing system in Addis Ababa

Until the advent of the military (Derg) regime in 1974, all land in Ethiopia was privately owned. This situation remains in that Ethiopia's Constitution declares that land ownership is "vested in the State and in the people of Ethiopia. Land is a common property of the nations, nationalities and people of Ethiopia and shall not be subject to sale or to other means of transfer."

In urban areas, local authorities can lease this land through a Lease Proclamation. Land leases are sold in two ways: direct allocation, where a 'base price' for the land servicing is paid, and land auction, where land is sold to bidders at a market-related price. Once the land is identified, it must be prepared for the planned developments. This means the land must be cleared and serviced. If households are living on this land, they must be compensated for the lost value of their structures. The duration of lease varies from 99 years for residential land, to 60 years for commercial and all the way down to 5 years for small enterprise development.

In Addis Ababa, 94% of released land is allocated directly at the base price for activities and development seen to be of strategic importance to the fulfilment of the spatial plans (Kognova and Zenebe, 2014). These activities can include the provision of housing, in which case land can be allocated to the State for supplying condominium-style development (90% of units delivered) or to housing cooperatives (7%) or private developers (3%). Since little land is available on the open market, the demand for land far outstrips the supply.

Land leasing also takes place on the periphery of the city. However, due in part to the slow release of land (a ramification of needing to first service and process land before its auction or allocation), farmers on the edges of the city have taken to illegally subdividing their plots and selling off the parcels directly to households who build their own dwellings.

The proceeds from land leasing are dedicated to infrastructure provision. This represents an important form of land-based financing but only provides 9% of the city's capital expenditure. This system does have its shortcomings, in that it creates an artificial market situation: constrained supply is coupled with high demand, leading to high prices. Furthermore, the land leasing system has not been able to address the housing needs of the very poorest in Addis Ababa.

6.2 Nature of property developers

A wide range of developers are active in sub-Saharan Africa, as shown by the types of developers involved in the sample of 28 property developments (Table 5).

Table 4: Types of property developer

TYPE OF DEVELOPER	COUNTRIES WHERE THESE DEVELOPER TYPES HAVE BEEN INVOLVED
Large-scale private developer acting as ‘umbrella’ developer, working with smaller scale developers (not identified).	Angola, Kenya, Rwanda
Medium- to large-scale partnership between government and private developer	Ghana, Cameroon, South Africa, Zimbabwe
Small-scale partnership between government and private developer on commercial property developments	Nigeria
Large-scale private developer undertaking complete development, typically with access to international sources of finance	Cameroon, Côte d’Ivoire, DRC, Ghana, Kenya, Senegal, South Africa, Uganda, Zambia.
Small-scale private developer undertaking complete development	Ghana, Nigeria, Rwanda.
Parastatal developer	No developers identified in this category, but some cooperative developer entities have public partners giving situations which, in aggregate, are close to being parastatals
Public sector developer, sometimes with construction firms acting as subsidiary ‘developers’ but taking little risk.	Angola, Benin, Ethiopia, Mozambique.
Community-based developers structured as NGOs.	Kenya, Ethiopia

The results in Table 5 are based on a sample of property developers, and each country may have a range of developer types. Further, many property developments are undertaken by individual property owners, without a developer.

Currently there is a strong drive by international property developers to invest in sub-Saharan Africa. These

developers are often active in locating land for large-scale developments, which may or may not be well located in relation to the city structure. Smaller developers typically rely on local finance sources and may be financially constrained specifically with regard to making upfront payments associated with a property development.

6.3 Access to finance

This research paid only limited attention to the ways in which developers access bridging finance and property owners access finance to cover the purchase price of the property. However, in 15 of the 28 case studies a substantial

proportion of the finance is being raised internationally, with the balance likely to be financed by local banks and through equity. In the case of finance for purchasing properties, the three country case studies found that:

- In Ethiopia, loans to middle- to lower-income home buyers in condominiums are facilitated by the city and provided by the National Bank at a subsidised interest rate.
- In Kenya, traditional mortgage finance makes up approximately 14% of the total credit to the private sector. In 2013, there were approximately 20 000 mortgages across the country worth approximately US\$1.4 billion. This number has been slowly increasing, constrained largely by high and variable interest rates. A growing trend in Kenya generally, and in Nairobi specifically, is microfinance for the construction of housing. Many of the existing microfinance institutions have begun to offer alternative savings and lending products aimed specifically at housing. Beyond the traditional microfinance institutions, Savings and Credit Cooperatives (SACCOs) have increased dramatically over the past few years. In 2013, there were 1.7 million registered members of SACCOs in Kenya (CAHF, 2014).
- In Zimbabwe, lending is largely short term and dominated by the main 5 commercial banks, which lend 59.18% of the country's total loans. Mortgage lending is dominated by the Central African Building Society (CABS), followed by CBZ Bank. Interest rates on borrowed money are high, averaging approximately 15% per annum (CAHF, 2014).

6.4 Land-based financing – practice related to potential

6.4.1 Learning from the 31 largest cities

The results from research into a total of 31 cities in 22 countries and actual practice of 22 cities in 16 countries are considered. These results are drawn from the ALICS database.

The 10 countries with the least potential (Figure 11) are Guinea, DRC, Benin, Congo (Brazzaville), Mali, Cameroon, Angola, Côte d'Ivoire, Burkina Faso and Mozambique. The research included 10 property development case studies, located in 6 of the countries. The extent of land-based financing was found to be neutral or negative for 7 of these property developments. Substantial land-based financing is used in the other three developments (Kinshasa and Lubumbashi in DRC and Luanda in Angola). However, these are all large-scale developments on the periphery of cities (on reclaimed land in the case of Kinshasa) where developers recognised that they had to provide connector and bulk infrastructure themselves if the development was to go ahead. This type of land-based financing arguably takes place in the absence of effective government and effective land-administration systems.

The middle group in terms of potential contains 8 countries: Zimbabwe, Malawi, Ethiopia, Nigeria, Senegal, Uganda, Zambia and Tanzania. Nine property development case studies were investigated in 7 of these countries: (Tanzania and Malawi not included; 2 developments in Ethiopia and 3 in Nigeria). Of the 9 property developments, 7 were shown to use significant land-based financing, one was neutral and one was negative, indicating subsidies.

The highest potential was found for 4 countries and their largest cities: Kenya (specifically Nairobi), Ghana, Rwanda and South Africa. Nine property developments were studied, 2 in each country with an additional one in Ghana. A significant level of land-based financing was found in 8 of the developments. The exception was a project in Kigali that received substantial subsidies.

The research found that countries with higher potential apply land-based financing to a greater extent. Therefore, a concerted action by the state and cities, supported by international development agencies, has the potential to create a successful system of land-based financing in most cities.

6.4.2 Lessons from the three case study cities

In addition to the scan of the 31 largest cities in the region, (Section 6.4.1) more detailed work was done on the experience of land-based financing in Addis Ababa, Harare and Nairobi (Table 6).

Table 5: Findings from three sub-Saharan cities

	ADDIS ABABA	HARARE	NAIROBI
Land-based financing instrument	Land lease (combined land tenure, through lease, with the land development rights)	'Endowment' contribution (10–13% of project value)	Infrastructure levy (0.05% of project value)
Effectiveness of the LBF instrument	Effective at delivering integrated land development and infrastructure	Contributions not spent on infrastructure because of weak city finances and depleted operating account	Levy not ring-fenced and so not used for infrastructure investment
Challenges	Land supply is constrained, with the consequence of poor people being priced out of the city land market	Quasi-legal peri-urban developers competing with formal developers, hence low formal supply of property development projects Unpredictable and non-transparent city-wide planning Unconstructive tensions between national and local government	Overheated property market, operating largely outside of the legal framework, with extensive political interference Infrastructure investment and land-use planning not synchronised City's institutional arrangements not designed for integrated infrastructure investment
Opportunities	Growing financial contribution to city revenues for infrastructure investment Growing professional and technical capacity to manage LBF instruments	Substantial (but uncoordinated) provision of infrastructure 'in kind' by developers Growing economy Innovative property development finance from private sector	Significant new road and rail infrastructure is conducive to new land value capture instruments High capacity to provide in-kind contributions of infrastructure by developers
Lessons	Investing resources in setting up LBF systems does produce results (although high levels of state control over land, infrastructure and planning is a unique advantage)	A city's in a very weak financial position is not able to invest in any infrastructure, and even LBF instruments cannot assist very much.	The combined effects of rampant property speculation and government interference in the property market makes it difficult to design effective LBF instruments.

7

WHAT IS WORKING; WHAT IS NOT

It is not surprising that the relationship, between the potential for land-based financing and the practice, is not particularly strong. The political and economic complexity relating to the property development process, compounded by often ill-conceived regulatory and fiscal frameworks, underscore the difficulty of getting effective land-based financing to work in the region. Some of the main factors, which are not necessarily directly measurable but inevitably have a major influence, are addressed below.

The influence of political economy

The term 'political economy' here relates to the overall governance of a country, the relationships between the state and cities, and the institutional arrangements in place to provide urban infrastructure. These in turn reflect the balance of economic power within a particular city and country. A key dimension for property development is the interplay between the political and institutional arrangements on the one hand and the distribution of economic opportunities on the other. In many sub-Saharan African countries, where relatively few economic opportunities exist and are concentrated in only a few economic sectors, competition over the profits from property development is invariably intense.

A country's political economy has a major influence on the effectiveness of urban development, the financing of infrastructure and the associated arrangements for applying land-based financing instruments. This complex factor is not possible to measure using the criteria for effective land-based financing (Section 4) and is therefore missed to a large degree in the analysis of 'potential' (although governance by the state is included as a criterion and has a measure). Yet this factor remains a key influence on the effectiveness of land-based financing, as shown by the country case studies.

For example, following the 2005 election crisis in Ethiopia, political interventions in the administration of Addis Ababa resulted in a relatively seamless line of accountability between the national and local government bodies. This had the effect of enhancing the city's capacity to raise revenues through land leases, albeit at the expense of multiparty democracy. In Kenya, the contestation among politically well-connected individuals to capture the benefits of property development in Nairobi has resulted in a free-for-all situation, in which land-use regulations have become largely irrelevant and the integrity of the city's land register is now in doubt. The resulting proliferation of extra-legal land development of all scales contributes to the city's difficulty in using its available land-based financing mechanisms to generate infrastructure finance. Finally, with economic collapse and fierce political conflict, Harare has been rendered almost completely impotent in its capacity to finance infrastructure of any sort, through any means. Certainly the existing land-based financing instruments make no noticeable contribution to the city's capital budget. Notwithstanding a new Constitution in 2013 guaranteeing local government powers and revenue sources, the city's administration remains vulnerable to political conflict on the national stage and has seen no appreciable or practical change in the institutional arrangements or functional responsibilities needed to carry out effective urban management.

Land is a highly contested feature of every country in the region. Histories of colonial dispossession, followed often by civil unrest and territorial conflicts, have left African countries with a legacy of ambiguous land tenure and land development systems. In each city studied, the contested nature of land has surfaced. It underlines the reality that, while technical and legal reforms will go some way to address the need for more effective urban land-

based financing, all of these initiatives will have to be grounded in a deep understanding of the particular nature of the land tenure, land-use and land-administration systems applicable in each sub-Saharan African city.

In-kind contributions are happening but there are concerns

In-kind contributions by developers are taking place across almost all of the countries studied, sometimes matched with a subsidy from the city or the state in the form of land provided at below market price. Further, in-kind contributions are found across the cities, from those with the lowest to those with the highest potential. Where city administrations are relatively weak, developers have little option but to build connector and, sometimes, bulk infrastructure themselves.

This research has not been able to cover how infrastructure associated with individual projects integrates with infrastructure as a whole. However, the concern is that, without proper planning and management of developers, such integration will not take place properly.

Furthermore, in-kind contributions are likely to be biased towards larger-scale property developments, where the developers are able to raise the capital to provide infrastructure external to the area being developed. A developer of a smaller project is less likely to be able to raise the amount of capital needed to provide infrastructure beyond that which serves the immediate needs of the particular project.

Weak governance systems undermine the potential for land-based financing instruments using fees or charges

The importance of strengthening governance arrangements for sub-Saharan African cities has been emphasised elsewhere in this report. Systematic and efficient land-based financing, especially where it depends on the city requiring the payment of fees or charges, is impossible to create in a policy and legislative vacuum, within dysfunctional institutional

arrangements. Initiatives to strengthen urban governance, through both national legal and policy frameworks for local government and the internal governance of cities themselves, are all important to improve the capacity of cities to implement land-based financing. Indeed, it can be argued that improved urban governance and greater use of land-based financing are interdependent; it is difficult to conceive of a city achieving the one without the other.

Land-based financing largely bypasses the poor

In theory, land-based financing should have pro-poor outcomes. In a best case scenario, the system captures the surplus value created by the land development and spends it on infrastructure that directly benefits the poor. A worst case scenario is one where developments are built for the well-off but at least are not subsidised by public money. In practice, neither outcome is attained, not even the worst case scenario. In Addis Ababa, the city's control over the supply of land via the lease system is insufficient to meet the demand, with the result that land access is increasingly unaffordable to the poor who are inevitably displaced by developments on leased land. In Nairobi, developers make in-kind contributions of infrastructure but only to serve the needs of their particular projects, designed for the wealthy. While it could be argued that the provision of peri-urban land to poor (and some not so poor) households is beneficial, it comes without any mechanism to finance the infrastructure needed to integrate the new settlements into the urban system.



8

IMPACT OF LAND-BASED FINANCING ON URBAN DEVELOPMENT

8.1 Making gains but too slowly

Urban infrastructure systems in sub-Saharan African cities are often dysfunctional. Serious infrastructure backlogs exist, with statistics collected for the 31 largest cities in the subcontinent showing:¹³

- 45% of citizens do not have adequate water supply
- 59% do not have access to 'sewerage'¹⁴
- 26% do not have access to electricity

While the absolute number of people with access to infrastructure is increasing (see Report 1.4), the high rate of population growth may mean that the percentage of people in cities with access to adequate services is not increasing, or is not increasing as fast, as is the case with electricity access. Furthermore, having a connection to a

water, sewer or electricity grid is only part of the requirement for an adequate service. The failure of bulk supply systems, and sometimes connector infrastructure, means regular power and water supply cut-offs. This is part of life in Addis Ababa, Nairobi and Harare, for example. It affects all consumers of services, but the poorest are worst off.

Land-based financing of urban infrastructure is obviously contributing to improvements but, while not measured as part of this research, the indication is that the impact is too small and that benefits tend to accrue to enterprises and high- to middle-income households; seldom to poor households.

8.2 The economic versus social development argument

Cities that are striving to move from 'survival' mode to a more advanced stage have to make difficult trade-offs. From a financial aspect, one typical trade-off might be deciding to subsidise commercial and medium- to high-income residential property developments, thereby subsidising the property owners who become part of these developments. The subsidy may take the form of providing land at below market value or supplying internal infrastructure to the property development, or even covering part of the cost of the building (a house). This

type of subsidisation is happening, notably in Angola, Benin, Côte d'Ivoire, Cameroon, Rwanda and Uganda, and is most common in housing developments (addressed in more detail below) as well as large-scale mixed-use developments.

The motivation may not often be transparent, but two primary reasons are: (1) the city and/or the state want to promote economic development of the city and believe that offering a subsidy is necessary to get developers to

13. Note that the data is outdated with some figures as old as 2006 while some are more recent (See Report 1.10 for more information).

14. As there is some uncertainty over what is access to 'adequate sanitation' and what is access to 'sewered sanitation', the likelihood is that this number relates more to 'availability of sanitation infrastructure' which may include 'on site' sanitation and public sanitation facilities.

commit to property developments; (2) the initial belief that the housing part of the project is for the poor, when in reality the cost of the housing units is way outside what poor households can afford. At the same time, subsidising

infrastructure for low-income residential property developments – whether in ‘greenfield’ or ‘in situ upgrade’ – is neglected, despite strong social development arguments for using subsidies for this need.

8.3 Infrastructure fragmentation

The importance of planning for integrated city infrastructure is obvious. However, with sub-Saharan African cities growing at their current rate and the lack of technical expertise to plan and manage growth, infrastructure inevitably is provided in ‘pockets’, serving only specific property developments. There are arguments for planned, decentralised infrastructure relying on small-scale systems (Bieker et al., 2010; Nelson, 2008), but these become less feasible as densities increase and, for large cities, well-functioning networked infrastructure for roads,

water supply, sewerage and electricity are necessary. The type of infrastructure provided in ‘pockets’, typically associated with in-kind contributions by developers, may not serve the effective functioning of city-wide infrastructure, may ignore neighbouring developments and may be cost inefficient. Furthermore, such an approach to infrastructure provision will only exacerbate, not mitigate, already extremely high levels of inequality in the access to basic services.

8.4 Residential infrastructure and housing for poor households

As noted above, many developments originate from an identified need to address the chronic shortage of housing and commercial property, including in many cases the shortage of low-cost housing (at least as a portion of the development). However, the end result is often unaffordable to the intended beneficiaries. Two forces appear to push prices up beyond the target market: (1) the construction cost is higher than expected (sometimes as a result of the specifications being too high); and (2) speculation and resale occur in response to the high demand. In the case of heavily subsidised housing, allocation is an issue and is seen as a tool for political manipulation.

Most of the documented housing projects, both state and private, are on ‘greenfield’ land due to issues of titling and because land is cheaper. These developments are taking place in the midst of largely informal and surprisingly heterogeneous tenure arrangements. Formal land titling in many cases is not the norm. It is estimated at less than 3% in the Côte d’Ivoire and less than 10% in Cotonou, Benin. At the other extreme, all land in Mozambique and Angola is state-owned.

There also appears to be a clear push for mortgage finance for the middle class. Housing is being built for this market by the private or public sector and sold at unsubsidised market rates, with the expectation that these households will access housing finance. This approach is strongly supply-driven, without an appreciation of the levels of access to credit in this market.

Many of the property developments studied deliberately target high-income residents, but these developments are often subsidised, motivated in part by the desire to attract investment in these cities. This could be a deliberate local government strategy to intervene in this market, either to increase housing stock to satisfy demand, or to generate increased future revenue streams from developments, or both. However, when city and state capital resources are constrained, allocating city and state resources to this type of development could reduce the capital available for investment in infrastructure for low-income housing, particularly if the anticipated future revenue streams do not materialise. This situation could be improved if land-based financing was taking place at a level that allowed cross-subsidisation of infrastructure

serving low-income residential areas. However, this was not found to be the case. It is logical to assume that, as more of these types of developments are subsidised, the state resources available for subsidising the poor will decrease. Cornubia in Durban is the only example found where an attempt was made to quantify the long-term financial benefit of the development to the municipality. The finding should serve as a warning to municipalities: the net present value of all of the revenue streams to the municipality does not outweigh the initial municipal capital investment. Therefore, subsidising higher income and non-residential developments may not have the intended long-term benefits, even in a highly functional municipality with a strong record of property rates and municipal tariff collection.



9

PROPOSED INTERVENTIONS

Given the large gap between the cost of urban infrastructure required to provide for economic and social development in the region and the availability of finance, all available infrastructure finance mechanisms must be considered. Land-based financing certainly has considerable merit and should be pursued by sub-

Saharan African governments and the development agencies which support them. This will contribute to increasing the emphasis on urban infrastructure, balancing the priority currently given to national-scale transport, energy and water resource infrastructure.

9.1 Political economy

The political economy of each city and each country is different and constantly changing. While it is easy to say that the political economy of land development and urban land is a crucial piece of the land-based financing puzzle, identifying concrete interventions to change the situation is much harder. In principle, however, interventions that promote the following will be valuable for promoting land-based financing in the region:

- a. Ensuring that cities have wider control over the provision of urban infrastructure: building the argument for land-based financing is very difficult if the cities do not have this mandate.
- b. Promoting a clear governance framework for cities, including law, policy and institutional arrangements: uncertainty over urban management powers brings conflict between national and local political forces, which undermines the rationale for introducing and strengthening land-based financing.

- c. Promoting accountable and responsive government: when implementing land-based financing, the high risk of corruption and financial mismanagement demands that government accountability and responsiveness improve, particularly related to budgeting, performance management, procurement and financial reporting.
- d. Clarifying urban land policies and regulatory frameworks: contestation and uncertainty over underlying land tenure arrangement are present in most cities in the region, while the frameworks regulating land use and development are notoriously inappropriate and ineffective. Incremental improvements in the urban land sector will be essential to create an efficient and inclusive urban land management system that is conducive to land-based financing.

9.2 National infrastructure investment framework

The intergovernmental fiscal framework for sub-Saharan African countries needs to recognise the importance of land-based financing as an infrastructure financing mechanism, alongside the other three primary financing mechanisms: transfers and donations, city own sources of

funding and service provider funding. An infrastructure investment framework needs both to focus on capital finance and to address the financial viability of cities and other local governments, by understanding their operating expenditure requirements and the revenue

that they can (and should) raise to cover operating expenditure. The key features of a national infrastructure investment framework are proposed as follows:

- a. The role of the state, city, parastatals and the private sector in providing and funding infrastructure.
- b. The design of intergovernmental transfers in the form of tax-sharing, general purpose grants and specific purpose grants.
- c. The role of international development agencies in funding urban infrastructure.
- d. The extent to which cities can raise own revenues to cover necessary operating costs and generate surpluses that can be used for infrastructure investment.
- e. The extent of borrowing by the state, cities or parastatals, and the extent to which the state will guarantee loans taken out by cities or parastatals.
- f. The obligations of parastatals to finance urban infrastructure at sufficient levels to provide the service they are responsible for to all.
- g. The application of land-based financing and the type of financing instruments to be promoted.

Assuming, as is proposed below, that the land-based financing instruments will primarily be in-kind contributions and development charges, the state should develop a policy for these instruments.

Ideally the investment framework should be based on an analysis of costs and revenue along the lines of the 'Municipal Infrastructure Investment Framework' in South Africa (DBSA, 2010). But it is possible to work on a progression from a simple framework, which is largely conceptual, to one with a full analysis.

9.3 City infrastructure investment planning

An infrastructure investment plan is essential for a city to be able to relate infrastructure requirements and associated costs to the availability of funding. Such a plan also allows a city to better understand the possible levels of service and the extent to which services reliant on infrastructure can be provided at an adequate service level to all in the city. Key features of a plan should include:

- a. The role of the city and its service providers – typically parastatals – in providing and financing infrastructure.
- b. An understanding of the city's social and economic objectives and the role subsidies play (see Section 8.2).
- c. Identifying a service provision programme based on increasing coverage of adequate services, taking population and economic growth into consideration.
- d. An assessment of transfers available to the city, likely trends and the targeting of transfers at particular services and associated infrastructure.
- e. An assessment of the revenue sources available to the city and the extent to which these can cover necessary operating costs.
- f. Opportunities for the city to borrow or use operating surpluses to fund infrastructure.
- g. An understanding of the ability of parastatals to finance the infrastructure for which they are responsible in the city, as well as the extent to which the city can contribute to the financing of this infrastructure.
- h. An assessment of the extent to which land-based financing can be applied and of the instruments which are most appropriate (see below).

Like the investment framework, the investment plan should ideally be based on an analysis of costs and revenue along the lines of the 'Infrastructure Investment Planning' guideline used in South Africa (DBSA, 2009). Again, it is possible to work on a progression from a simple, largely conceptual plan, to a plan with a full analysis.

9.4 Application of land-based financing instruments

The two land-based financing instruments with most potential for sub-Saharan Africa are in-kind contributions by developers and developer charges. This is not to suggest that other instruments do not have a place. For example, if the city has rights to sell or lease land that is under state ownership, this is certainly a feasible land-based financing instrument. Furthermore, as cities advance and require (for example) mass transit systems, such infrastructure may be best funded through betterment taxes. However, in-kind contributions exist and will continue to exist, and development charges have great potential. Therefore, they represent a good starting point for a typical city looking to improve access to finance for urban infrastructure through land-based financing instruments.

Development charges

Development charges are calculated based on the cost of infrastructure required to serve the property developments in particular contexts (see Box 1). A range of charges, levies and fees are currently applied in sub-Saharan African cities, many of them development charges, but very few are effective. This highlights the importance of promoting and supporting the use of development charges on the subcontinent. The potential to raise additional finance in this situation, where cities are expanding rapidly, is large.

Alternative types of charges based on development, which amount to a 'benefit tax', have the advantage of

being relatively simple to calculate, possibly based on the value of the property development.

In-kind contributions by developers

Once a sound plan and a commitment to a development charges policy are in place, negotiations with individual developers become easier. However, this does not remove the need to negotiate in-kind contributions for unusual and/or large-scale property developments (perhaps in lieu of a development charge), so long as the plan provides a sound basis for entering into these negotiations.

Application of the funding raised through land-based financing

The principle is that funds raised through land-based financing should be used for investing in connector, bulk and social infrastructure, over and above that required within the property development. Connector infrastructure has the highest potential for the application of land-based financing, as it can be directly attributed to a particular development. Where there is potential to raise funds in excess of that required to fund connector, bulk and social infrastructure, it may be possible to cross-subsidise from commercial and middle- to high-income residential property owners to fund infrastructure for poor households. However, given the current practices and case study examples, it is evident that the opportunity for this application of land-based financing is small.

9.5 Working with developers

Property developers are key players on the land-based financing stage, but this sector is poorly developed in sub-Saharan Africa. A more stable and transparent property market needs to be created, with simpler procedures and fewer, lower barriers to entry for smaller developers.

Greater transparency also needs to be introduced into the property development sector, which is notorious for corruption and bribery. Efforts should be focused on improving the overall governance arrangements for land development. Interventions should be introduced that both facilitate project implementation by developers and

empower citizens to hold both the developers and the relevant authorities to account for land-based transactions underpinning property development projects. Relationships between developers and politicians that are too close need to be exposed, through systematically introducing greater transparency and openness in city governance. Where developers organise themselves into associations in order to promote their shared interests and objectives, these should be supported and strengthened, as the capacity of the sector as a whole to deliver property developments is a key requirement to introducing land-based financing.

9.6 Advocacy and support

Advocacy by international development agencies will be important, if land-based financing instruments are to gain traction in sub-Saharan Africa. While the Angolan, South African and Ethiopian examples show what can be done, relatively little is happening. Advocacy should initially be aimed at national governments, to provide them with support in preparing policies. National governments can then work with cities to assist them in preparing infrastructure investment plans and applying land-based financing instruments, specifically development charges. A further advocacy issue is that cities should avoid subsidising commercial and mid- to high-income residential developments, where these government investments are not recovered later through land-based financing instruments or other means.

9.7 Capacity development

It is trite to observe that improved capacity is needed to realise the potential of African cities. This is certainly true in the case of land-based financing, and capacity development is particularly important in specific areas, including land and property valuations, municipal finance, land administration, infrastructure engineering and urban planning. Over and above these initiatives to strengthen individual professional sectors, the overall capacity of the city governance system has to be strengthened. Meaningful land-based financing is not possible without more efficient, better capacitated local government, as the wider the application of land-based financing instruments, the greater the capacity of local government will be. Capacity building and land-based financing are thus inseparable and parallel requirements.



10

CONCLUSION

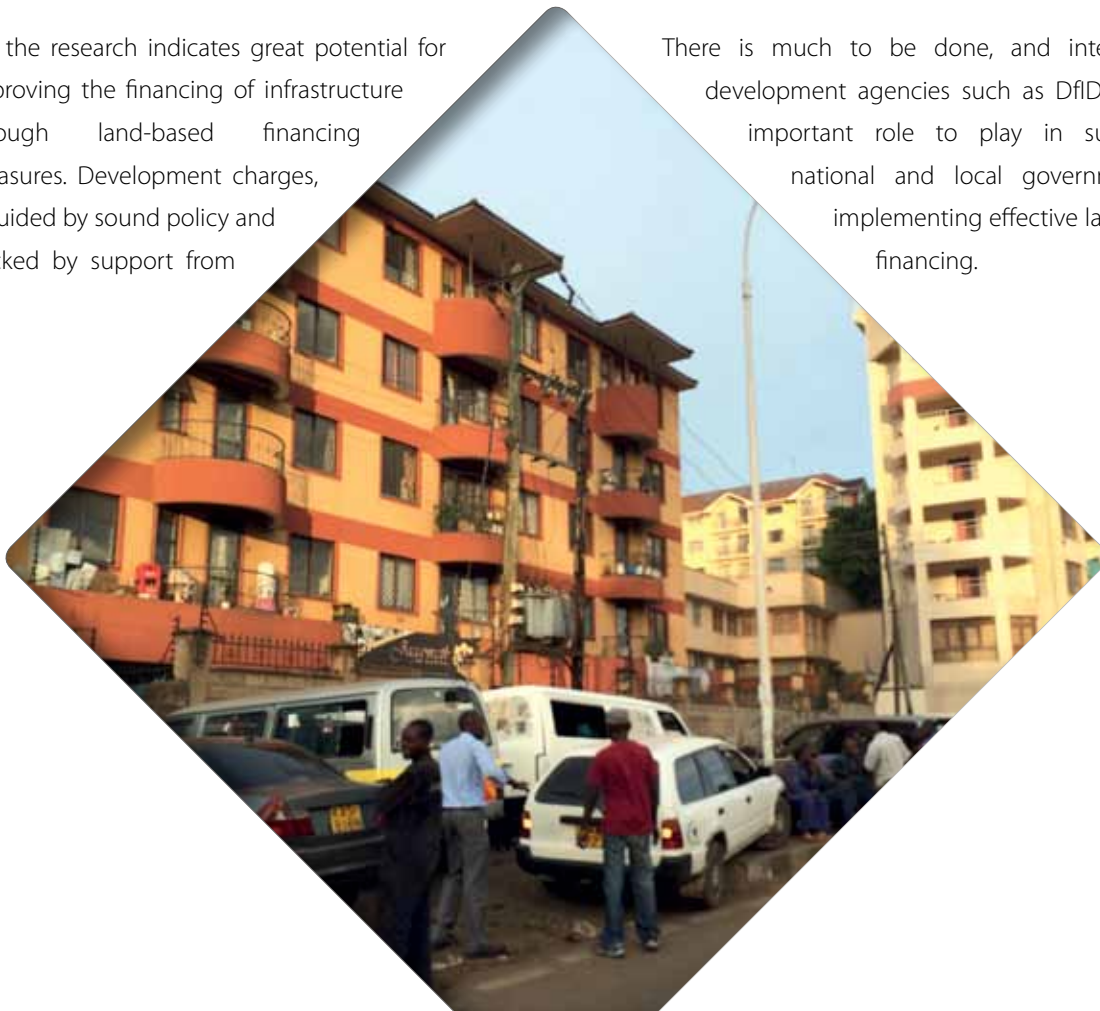
The research summarised in this report has been aimed at discovering what is happening with land-based financing both in sub-Saharan Africa and the rest of the world, with the aim of improving how this method of financing infrastructure is applied in the subcontinent. The research has highlighted the great need for improved arrangements for financing urban infrastructure, given the extent to which infrastructure systems are dysfunctional in many sub-Saharan African cities. But, taking a fairly broad definition of land-based financing, land-based financing is being used quite widely in the form of in-kind contributions by property developers. However, other instruments, conceived typically as some sort of tax or fee for infrastructure, have been ineffective in creating infrastructure improvements. Overall, the scale of finance made available through these means, in relation to the need, remains small.

Yet the research indicates great potential for improving the financing of infrastructure through land-based financing measures. Development charges, if guided by sound policy and backed by support from

national governments and international development agencies, have a big part to play in the region's many rapidly urbanising cities.

The research brief from DfID also included the requirement to assess the potential role of land-based financing measures in funding infrastructure serving poor households. Here the conclusions are rather negative. At best, land-based financing should be aimed at maximising funding for infrastructure to commercial and residential property for middle- to high-income households. This will at least avoid having to subsidise infrastructure for these developments and hence release other sources of funding for infrastructure for the poor, including slum upgrading. But, even with these measures in place, there remains an alarming shortage of funding for services to poor households.

There is much to be done, and international development agencies such as DfID have an important role to play in supporting national and local governments in implementing effective land-based financing.



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